

1 LOIS J. SCHIFFER
Assistant Attorney General

2 MARTIN F. MCDERMOTT
3 LEWIS M. BARR
LISA LYNNE RUSSELL
4 MARK A. RIGAU, Trial Attorneys
U.S. Department of Justice
5 Environmental Defense Section
P.O. Box 23986
6 Washington, D.C. 20026-3986
Telephone: (202) 514-2285

7 ALEJANDRO N. MAYORKAS
8 United States Attorney
LAWRENCE KOLE
9 Assistant United States Attorney
Room 7516 Federal Building
10 300 North Los Angeles Street
Los Angeles, CA 90012
11 Telephone: (213) 894-3996

12 Attorneys for Federal Defendants

13 IN THE UNITED STATES DISTRICT COURT
14 FOR THE CENTRAL DISTRICT OF CALIFORNIA

15 STATE OF CALIFORNIA, on behalf of the
16 CALIFORNIA DEPARTMENT OF TOXIC
SUBSTANCES CONTROL,

17 Plaintiff,

18 vs.

19 UNITED STATES OF AMERICA,
20 DEPARTMENT OF THE ARMY, and
DOES 1 - 100, inclusive.

21 Defendants.

22 CITY OF SAN BERNARDINO MUNICIPAL
23 WATER DEPARTMENT,

24 Plaintiff,

25 vs.

26 UNITED STATES OF AMERICA,
27 DEPARTMENT OF THE ARMY, and
DOES 1 - 100, inclusive.

28 Defendants.

No. CV 96-5205MRP(VAPx)
No. CV 96-8867MRP(VAPx)
(Consolidated)

APPENDIX OF EXHIBITS
IN SUPPORT OF UNITED
STATES MOTION
FOR SUMMARY
JUDGMENT ON THE
FIRST CAUSE OF ACTION
AND PART OF THE THIRD
CAUSE OF ACTION OF
THE CITY'S COMPLAINT

VOLUME 3 OF 6

Date: February 21, 2000
Time: 10:00 a.m.
Room: Courtroom 12

Judge: Mariana R. Pfaelzer

**APPENDIX OF EXHIBITS IN SUPPORT OF MOTION FOR SUMMARY
JUDGMENT ON THE FIRST CAUSE OF ACTION AND
PART OF THE THIRD CAUSE OF ACTION OF THE CITY'S COMPLAINT**

VOLUME 1 OF 6

- Ex. 1 - April 1976 Water Department Plant Production Data, Dep. Ex. 543
- Ex. 2 - Nov. 17-21, 1977 Water Department Purchase Requisitions, Dep. Ex. 576
- Ex. 3 - Koppers Company's Technical Data Sheet for Bitumastic Super Tank Solution, Dep. Ex. 505
- Ex. 4 - Tnemec Company's Technical Data Sheet for Hi-Build Tank Coating, Dep. Ex. 506
- Ex. 5 - Engard Coatings Corp. Technical Data Sheet for ENGARD 463 Coal Tar Epoxy Coating, Dep. Ex. 577, Doc. Prod. # CITY 10-1238-1243
- Ex. 6 - Koppers Company's Technical Data Sheet for Bitumastic Jet-Set Primer, Dep. Ex. 566
- Ex. 7 - Koppers Company's Technical Data Sheet for Bitumastic No. 300-M, Dep. Ex. 564
- Ex. 8 - September 4, 1980 Field Form For Water Works Review
- Ex. 9 - May 6, 1981 Report, "Purgeable Organics in Four Groundwater Basins" by Stephen Nelson, A.M. ASCE, Safi Kalifa, and Frank Baumann, Dep. Ex. 507
- Ex. 10 - September 23, 1981 Field Form For Water Works Review Dep. Ex. 510
- Ex. 11 - December 21, 1981 Letter from K. B. Stinson, of East Bay Municipal Utility District re: list of acceptable reservoir coatings
- Ex. 12 - February 25, 1982 Memo from J. L. Stone, subj.: "Koppers-Bitumastic Super Tank Solution" - Coal Tar Coating, Dep. Ex. 512
- Ex. 13 - February 25, 1982 Memo from W. C. Gedney, subj.: Use of Koppers Bitumastic Super Tank solution Coal Tar Coating, Dep. Ex. 511
- Ex. 14 - March 1, 1982 Memo from Chet Anderson to Sam Kalichman, subj.: Koppers Water Tank Coating - Organics
- Ex. 15 - April 19, 1982 Memo from Endel Sepp, Sanitary Engineering Branch to Regional & District Engineers, subj.: TCE in Water Tanks
- Ex. 16 - August 6, 1982 Memo from Jon M. Gaston, Chief of Sanitary Engineering Branch to H. F. Collins, Ph. D. Deputy Director of Environmental Health Division, subj.: Activity Report
- Ex. 17 - August 17, 1982 Memo from Sanitary Engineering Branch Berkeley to All Large Community Water Systems, subj.: Tank Coatings, Dep. Ex. 513

- Ex. 18 - August 19, 1982 Memo from Chet Anderson to SEB Staff, subj.: Info on Tank Coatings, Dep. Ex. 514
- Ex. 19 - October 4, 1982 Memo from Chet Anderson to SEB Staff, subj.: Tank Coatings - Corrections to 8-19-82 Memo, Dep. Ex. 515
- Ex. 20 - October 5, 1982 Memo from W. C. Gedney to C. E. Anderson, subj.: City of San Bernardino Tank Coating Problems, Dep. Ex. 516
- Ex. 21 - October 18, 1982 Water Dept. Memo from Joseph F. Stejskal to Herbert B. Wessel, subj.: Paint Required for Sycamore #1 Steel Reservoir, Dep. Ex. 545
- Ex. 22 - November 9, 1982 Water Dept. Memo from Joseph F. Stejskal to Herbert B. Wessel, Dep. Ex. 546
- Ex. 23 - November 1982 Article by William B. Harper titled, "Inspecting, painting, and maintaining steel water tanks," Dep. Ex. 559
- Ex. 24 - December 6, 1982 Water Dept. Memo from Joseph F. Stejskal to Herbert B. Wessel, subj.: Mountain Reservoir, Dep. Ex. 547
- Ex. 25 - January 12, 1983 Memo from Joe Como to John M. Gaston, subj.: Coal Tar Interior Coatings in Potable Water Tanks
- Ex. 26 - April 21, 1983 Memo from W. C. Gedney to C. E. Anderson, subj.: Tank Coating Problems - San Gabriel Valley Water Co., Dep. Ex. 520
- Ex. 27 - May 16, 1983 Memo from K. W. Campbell to All Large Community Water Systems in Imperial, Riverside, and San Diego Counties, subj.: Tank Coatings, Dep. Ex. 705
- Ex. 28 - May 19, 1983 Memo from Franklin T. Hamamura to All Large Community Water Systems, subj.: Coatings For Storage Reservoirs, Dep. Ex. 521
- Ex. 29 - June 8, 1983 Dept. of Health Sanitation and Radiation Laboratory Results of Drinking Water Samples for Chemical Analysis from Mountain Tank, Dep. Ex. 519
- Ex. 30 - June 30, 1983 City Classification of Pipe, Dep. Ex. 500
- Ex. 31 - October 6, 1983 Field Form For Water Works Review, Joe Bocanegra and Larry Cox, Engineering Supervisor, persons contacted, Dep. Ex. 522
- Ex. 32 - November 9, 1983 Interim Report on Warranty Inspections-Interior Coatings of Four Steel reservoirs by Harper & Associates Inspection Services, Dep. Ex. 590
- Ex. 33 - Report by Joseph P. Como, P. E., CA Dept. of Health Services, titled, "California Survey of Solvents Leaching From Cold-Applied Coal Tar Paints Used As Internal Coatings In Potable Water Storage Tanks"
- Ex. 34 - Job Description Chart, Lowe Dep. Ex. 579

VOLUME 2 OF 6

- Ex. 35 - April 25, 1984 Memo from Clarence Young to Cliff Bowen, subj.: Tank Coating Policy, Dep. Ex. 526
- Ex. 36 - May 4, 1984 Memo from W. C. Gedney to Clarence Young, subj.: Tank Coating Policy
- Ex. 37 - May 4, 1984 Memo from F. T. Hamamura to Clarence Young, subj.: Tank Coating Policy
- Ex. 38 - June 4, 1984 Memo from Clarence Young to Cliff Bowen, Bill Gedney, & Frank Hamamura, subj.: Tank Coating Policy
- Ex. 39 - June 13, 1984 Memo from F. T. Hamamura to Clarence Young, subj.: Tank Coating Policy
- Ex. 40 - September 20, 1984 from W. C. Gedney to Clarence Young, subj.: Tank Coating Policy
- Ex. 41 - October 9, 1984 Letter from Kirkham W. Campbell to Robert Friedgen
- Ex. 42 - November 7, 1984 Memo from Bill Gedney to Clarence Young, subj.: Implementation of Coating Policy, Dep. Ex. 527
- Ex. 43 - November 14, 1984 Memo from E. Sepp to SEB District Engineers, subj.: Water Tank Coatings
- Ex. 44 - November 21, 1984 Memo from Jeff Stone to C. E. Anderson, subj.: Riverside Highland Water Company - New Tank Coating, Dep. Ex. 706
- Ex. 45 - December 31, 1984 Special Bulletin from William B. Harper to Joe Stejskal re: Contamination of Potable Water from Volatile Organic Compounds Leached from Tank Coatings, Dep. Ex. 563, Doc. Prod. # CITY 02108-02114
- Ex. 46 - Special Bulletin from William B. Harper, subj.: Contamination of Potable Water From Volatile Organic Compounds Leached From Tank Coatings, Dep. Ex. 708
- Ex. 47 - January 4, 1985 Memo from Peter A. Rogers to All Large Public Water Systems re: Tank Coatings, Doc Prod. # CITY 02097-02098
- Ex. 48 - April 12, 1985 Letter from Robert W. Thompson to Chet Anderson, subj.: New 1.67 MG Steel Reservoir Tank Coating
- Ex. 49 - April 22, 1985 North San Bernardino - Muscoy Site Evaluation, Hazard Ranking Package, State Toxics Box Fund List, Dep. Ex. 709, Doc. Prod. # CITY 01314-01374
- Ex. 50 - May 9, 1985 Final Report - PCE / TCE Removal from John Carollo Engineers to Municipal Water Department, Doc. Prod. # CITY 01597-01642
- Ex. 51 - September 13, 1985 Memo from Joseph F. Stejskal to Herbert B. Wessel, subj.:

TCE/PCE Contaminated Water to East Twin Creek Flood Control Channel, Dep. Ex. 550, Doc. Prod. # CITY 01912

- Ex. 52 - May 1984 Report titled, "Water Quality Problems Associated with Reservoir Coatings and Linings by R. Scott Yoo, William M. Ellgas, and Raymond Lee
- Ex. 53 - December 30, 1985 Memo from Peter A. Rogers to All Large Public Water Systems, subj.: Tank Coatings, Dep. Ex. 528
- Ex. 54 - August 14, 1986 Amended Permit by Peter A. Rogers, Dep. Ex. 710, Doc. Prod. # CITY 05-0214-05-0223
- Ex. 55 - August 1986 Final Report titled, "Investigation of Sources of TCE and PCE Contamination in the Bunker Hill Ground Water Basin," submitted by URS Corp. to CA Regional Water Quality Control Board Santa Ana Region, Riverside, CA, Dep. Ex. 554, Doc. Prod. # CITY 00140-00265

VOLUME 3 OF 6

- Ex. 56 - November 19, 1987, Draft Report by William B. Harper titled, "Coal Tar Enamel as a Water Tank Lining - - Past, Present and Future," Dep. Ex. 562
- Ex. 57 - April 25-29, 1988 Public Water Supply Branch Annual Inspection Report , Dep. Ex. 501
- Ex. 58 - April 1992 Report by Joseph F. Stejskal titled, "Municipal Wellhead Treatment - A Water Department's Perspective," Dep. Ex. 542
- Ex. 59 - June 10, 1994 Soil Test Report by William B. Harper, Dep. Ex. 591, Doc. Prod. # CITY 12-1101-12-1109
- Ex. 60 - February 25, 1999 Executed Declaration of Joseph F. Stejskal, Dep. Ex. 551
- Ex. 61 - April 28, 1999 Plaintiff's City of San Bernardino Municipal Water Dept., Responses to Defendant's Interrogatories, Dep. Ex. 503
- Ex. 62 - June 1, 1999 Plaintiff City of San Bernardino Municipal Water Dept.'s Response to Defendant's Second Set of Requests for Admission, Dep. Ex. 538
- Ex. 63 - Undated Map "City of San Bernardino Water Distribution System," Dep. Ex. 544 (Oversized)
- Ex. 64 - September 30, 1977 Invoice for 1,000 Drums of TCE
- Ex. 65 - September 16, 1977 Invoice for 30 gallons of Koppers 2000C Thinner
- Ex. 66 - January 7, 1981 Construction Order to Recoat Mallory Reservoir
- Ex. 67 - January 15, 1978 Koppers Protective Coatings Bituminous Coatings List, Doc. Prod. # CITY 10-0900
- Ex. 68 - December 18, 1979 Work Order for Wiggins Hill Reservoir, Doc. Prod. # CITY 01-

- Ex. 69 - February 19, 1982 Work Order for Mountain No. 3 Reservoir, Doc. Prod. # CITY 01-4052
- Ex. 70 - Undated Engard Coatings Corp. Technical Data Sheet for Engard 800 Super Tank Coating, Doc. Prod. # CITY 10-1298-10-1303
- Ex. 71 - July, 1953 Plans and Specifications No. 603, "For the Furnishing and Erection of a Welded Steel Water Storage Tank For The Del Rosa System," (Excerpts)
- Ex. 72 - June, 1954 Plans and Specifications No. 616, "For the Furnishing and Erection of a Welded Steel Water Storage Tank For The Quail Canyon System," (Excerpts)
- Ex. 73 - May, 1955 Plans and Specifications No. 625, "For the Furnishing and Erection of a Welded Steel Domestic Water Storage Reservoir For The Terrace System," (Excerpts)
- Ex. 74 - Undated Plans and Specifications No. 636, "For the Furnishing and Erection of an Elevated Steel Water Storage Reservoir Which is Designated As Terrace Reservoir No. 3," (Excerpts)
- Ex. 75 - March, 1957 Plans and Specifications No. 642, "For the Furnishing and Erection of a Welded Steel Water Storage Tank For the Del Rosa System and Designated as Del Rosa Reservoir No. 2," (Excerpts)
- Ex. 76 - April, 1957 Plans and Specifications No. 641, "For the Furnishing and Erection of a Welded Steel Water Storage Tank Designated as Quail Canyon No. 2, Together With Additions to the Existing Quail Canyon Storage Tank No. 1," (Excerpts)
- Ex. 77 - January, 1959 Plans and Specifications No. 662, "For the Furnishing and Erection of a Welded Steel Domestic Water Storage Reservoir for the Sycamore System," (Excerpts)
- Ex. 78 - January, 1959 Plans and Specifications No. 672, "For the Furnishing and Erection of a Welded Steel Domestic Water Storage Reservoir for the Terrace System," (Excerpts)
- Ex. 79 - November, 1976 Specifications No. 857, "For the Interior Cleaning, Descaling, and Relining of the Del Rosa Number Two Steel Water Tank," (Excerpts)
- Ex. 80 - October 14, 1982 Koppers Protective Coatings Technical Data Sheet for Bitumastic Super Tank Solution
- Ex. 81 - May 11, 1983 Koppers Protective Coatings Technical Data Sheet for Bitumastic Super Tank Solution
- Ex. 82 - August 1, 1984 Koppers Protective Coatings Technical Data Sheet for Bitumastic Super Tank Solution-High Solids
- Ex. 83 - August 7, 1984 Koppers Protective Coatings Technical Data Sheet for Bitumastic Tank Solution

VOLUME 4 OF 6

- Ex. 84 - October 14, 1982 Koppers Principal Types of Protective Coatings - A Short Court in Practical Paint Technology to Assist Consulting and Maintenance Engineers
- Ex. 85 - November 17, 1982 Dept. of Health Sanitation and Radiation Laboratory Results of Drinking Water Samples for Chemical Analysis of Mountain Tank
- Ex. 86 - April 6, 1981 Letter from Jim Watson to Atchison, Topeka & Santa Fe Railroad, Ex. 567, Doc. Prod. # CITY 08-1442
- Ex. 87 - July 18, 1984 Letter from Fred Ehemann to Joe Stejskal, subj.: TCE & PCE results, Dep. Ex. 569, Doc. Prod. # CITY 08-1422
- Ex. 88 - July 26, 1984 Letter from Jim Watson to Tim Lassen, Dep. Ex. 570, Doc. Prod. # CITY 08-1418
- Ex. 89 - September 13, 1993 Environmental Control Inspection Report, Dep. Ex. 572, Doc. Prod. # CITY 04E-2083-04E-2086
- Ex. 90 - September 10, 1999 Declaration of Henry R. Stoner
- Ex. 91 - June 1981 Twelve Chapter Water System Master Plan by Camp Dresser & McKee Inc. and Willdan & Associates
- Ex. 92 - May 24, 1994 Uniform Hazardous Waste Manifest Form, Dep. Ex. 552, Doc. Prod. # CITY 06209
- Ex. 93 - July 15, 1999 Plaintiff City of San Bernardino Municipal Water Department's Response to Defendant's Third Set of Requests For Admission
- Ex. 94 - March 22, 1995 Muscoy Plume Operable Unit Record of Decision; Part I: Declaration, Part II: Decision Summary, Part III: Responsiveness Summary
- Ex. 95 - July 11, 1952 black and white aerial photograph from U.S. Geologic Survey, EROS Data Center (excerpt) (EPA administrative record)
- Ex. 96 - August 5, 1975 color infrared aerial photograph from U.S. Geologic Survey, EROS Data Center (excerpt) (EPA administrative record)
- Ex. 97 - October 1980 black and white aerial photograph from U.S. Geologic Survey, EROS Data Center (excerpt) (EPA administrative record)
- Ex. 98 - June 17, 1999 Deposition Transcript - Chester E. Anderson
- Ex. 99 - June 18, 1999 Deposition Transcript - Chester E. Anderson
- Ex. 100 - June 22, 1999 Deposition Transcript - Peter S. Brierty

VOLUME 5 OF 6

- Ex. 101 - June 3, 1999 Deposition Transcript - William C. Gedney
- Ex. 102 - June 28, 1999 Deposition Transcript - Gregory Gonzalez
- Ex. 103 - June 18, 1999 Deposition Transcript - William B. Harper
- Ex. 104 - June 28, 1999 Deposition Transcript - William B. Harper
- Ex. 105 - June 24, 1999 Deposition Transcript - Bernard C. Kersey
- Ex. 106 - June 2, 1999 Deposition Transcript - Michael H. Lowe
- Ex. 107 - June 22, 1999 Deposition Transcript - Michael Lowe
- Ex. 108 - June 18, 1999 Deposition Transcript - George Newlin
- Ex. 109 - June 22, 1999 Deposition Transcript - Arthur L. Rivera
- Ex. 110 - June 23, 1999 Deposition Transcript - Art Rivera
- Ex. 111 - June 1, 1999 Deposition Transcript - Jose Pedroza
- Ex. 112 - June 30, 1999 Deposition Transcript - Elias Shehab
- Ex. 113 - June 9, 1999 Deposition Transcript - Joseph F. Stejskal
- Ex. 114 - June 10, 1999 Deposition Transcript - Joseph F. Stejskal
- Ex. 115 - June 14, 1999 Deposition Transcript - Terry Ray Tonn
- Ex. 116 - June 17, 1999 Deposition Transcript - James H. Watson

VOLUME 6 OF 6

- Ex. 117 - June 15, 1999 Deposition Transcript - Donald E. York, Jr.
- Ex. 118 - January 19-21 Sources Of Hazardous Constituents in Municipal Solid Waste and Landfill Leachate
- Ex. 119 - February 1995 Revised Report Of Waste Discharge, Cajon Sanitary Landfill, Dep. Ex. 742
- Ex. 120 - January 25, 1999 Vicinity Map Newmark Groundwater Contamination Superfund Site
- Ex. 121 - October 30, 1991 Preliminary Assessment Summary Report
- Ex. 122 - March 25, 1998 Final Closure And Postclosure Maintenance Plan Cajon Sanitary Landfill, Dep. Ex. 746

- Ex. 123 - August 12, 1991 Workplan, Verification Monitoring Program, Cajon Sanitary Landfill, Dep. Ex. 740
- Ex. 124 - November 15, 1965 Garrett-Powers Letter
- Ex. 125 - June 1989 Final Report Solid Waste Assessment Test (SWAT) Cajon Sanitary Landfill
- Ex. 126 - January 1995 Sampling And Analysis Plan
- Ex. 127 - January 28, 1991 State Letter
- Ex. 128 - June 24, 1991 California Water Quality Control Board Santa Ana Region Clean Up And Abatement Order 91-95, Dep. Ex. 763
- Ex. 129 - Plaintiff City Of San Bernardino Responses To Defendant's Request For Admission
- Ex. 130- November 11, 1998 "Wells Cleanup Settlement Gets Approval, The Press-Enterprise, Riverside, California
- Ex. 131- Mid-Valley Sanitary Landfill Expansion-Final Environmental Impact Report-Vol. 1, excerpt 4.6-10
- Ex. 132 - October 15, 1997 Deposition transcript - Kevin P. Mayer Deposition
- Ex. 133 - February 26, 1996 City letter to Hon. George Brown
- Ex. 134 - May 19, 1999 City letter to Army Counsel
- Ex. 135 - June 22, 1999 City letter to Craig Cooper
- Ex. 136 - September 16, 1999 declaration of Raymond O. Powers
- Ex. 137 - Plaintiff's, City of San Bernardino Municipal Water Department, Responses to Defendant's Interrogatories
- Ex. 138 - April 27, 1982 Memorandum from Joseph F. Stejskal to Bernie Kersey
- Ex. 139 - Feb. 16, 1982 letter from Richard H. Jones, All-J Enterprises to Mike Lowe
- Ex. 140 - Undated Engard Coatings Corp. Technical Data Sheet for Engard 820 Super T & O Coating

Exhibit 56

PWSB EXECUTIVE STAFF

___ Branch Chief — Peter A. Rogers

___ Section Chief — Cliff Sharpe

Regional Engineer

___ Richard McMillan — Berkeley

___ Albert Ellsworth — Sacramento

___ Chet Anderson — San Bernardino

___ Tim Gannon — Santa Barbara

Technical Manager

___ Nadine Feletto — Sacramento Headquarters

___ Carol Kavooras — Sacramento Headquarters

___ Clarence Young — Sacramento Headquarters

FROM: C. Young

FWSB — Headquarters

For information

Comments:

DATE: NOV 16 1987

10/8

DEFENDANTS' EXHIBIT 562 FOR ID

BRYAN LUI, CSR NO. 11223

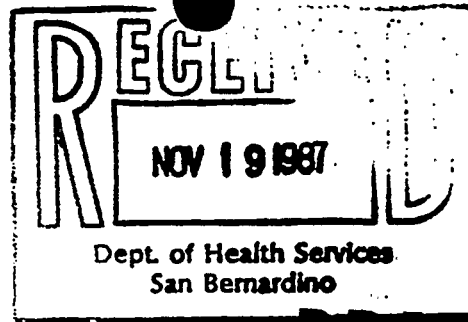
DATE: 6-16-99

WITNESS: HARPER, V.I.

United States Summary

Judgment Motion,

Ex. 56, Page 623



DRAFT

COAL TAR ENAMEL AS A WATER TANK LINING --
PAST, PRESENT AND FUTURE

WILLIAM B. HARPER, P.E.
HARPER AND ASSOCIATES, INC.
15400 RANCHITO DRIVE
LAKE MATHEWS (PERRIS), CALIFORNIA 92370

TECHNOLOGICAL HISTORY

When observing the history of a paint-type material versus a protective coating-type material, the use of coal tar products is the first of the technological advances toward protective coatings instead of architectural or aesthetic paint systems. Coal tar materials were first used for protection from intrusion of water against the substrate. Probably the best known event in history, where a bitumen or coal tar-type product was utilized, was in protecting the basket which floated the Prophet Moses down river to the Pharaoh's harem. This is recorded in the book of Genesis in the Bible and dates itself approximately 3500 years ago. Accordingly, it is obvious the use of bitumen-type products for water proofing boats or vessels was already well known.

Our first medieval observation of the use of coal tar pitch in the marine industry relates to approximately 1000 AD when the Vikings utilized crude distillation and mixed the distilled pitch material with animal hair for caulking of their boats. I don't need to relate the far reaching impli-

cations of the travels of the Viking hordes throughout the North Atlantic region, both in Europe and North America. The historical aspect of use of pitch materials by the Vikings was that they were using a distillation process to refine the tar from its natural state. In many of the past instances throughout history prior to this, the pitch was used in its natural state as it was found by the user.

The first patent concerning the utilization of coal tars was granted in 1681 in England under Patent No. 241. Also, in England in the late 1780's when the first principles of blast furnaces were patented, studies and utilization of coal tars for paints and coatings was already underway. Again, we are not talking about the use of natural pitch products found by someone in a remote location, but the actual commercialization of the use of coal tars for a myriad of products and usages. This was all a part of the advent of the industrial revolution.

As the water\gas industry developed in England in the 1800's, the British Royal Society

proved coal tar was a suitable bottom coating and Sir Humphrey Davie was credited with studies and decisions relating to its use. With the increasing use of iron and steel, the need for corrosion protection increased and again coal tar was used as a matter of course since its technology was tied to the developing steel industry.

After 1896 when German technology in the Ruhr began large scale studies of utilization of coal tar products for dyestuffs, the basic chemicals applications of solvent dispersed coal tars were developed for industrial application. These products will not be addressed herein, as they are cold-applied and this paper is mainly directed to totally relate to the use of coal tar enamel, not the many available coal tar solvent cutback derivatives.

RAW NATURAL MATERIALS - COMPOSITION AND STRUCTURE

Coal tar, being one of the first synthetics, is most dependent on its composition from its basic raw material, coal. Since the late 19th century coal tar has been the by-product of high temperature coke production and resulting pitch has been more inert and more resistant than those produced 100 years before. Coal tar and the fractions used for coatings are very complex in composition and have many unusual properties which point to a composition with some basic similar properties rather than random mixtures might be expected to give. It is not relevant at this time to delve into the chemical structure of the coal tar pitch products, as this is well documented throughout text- books regarding coal tar

pitch materials. Needless to say, there are many approaches to development of protective coating systems from coal tar, all relating to the basic composition of the material and its great flexibility for expanding into interrelated materials.

GENERAL HISTORY

In 1854 coal tar enamels and coatings were compounded to protect the interior hull surfaces of ships, particularly the then new corrosion problems concerned by moisture reactions with ash and coal in new steam vessels. Since that time, over sixteen thousand vessels have used coal tar enamel and coatings for corrosion protection, including the Queen Mary and the Queen Elizabeth. At the present time, rudder voids, bilges, bulkheads, tanks, etc. are also protected in this manner. Another of the outstanding historical coal tar enamel monuments is a drydock which was coated in 1892 and was continuously monitored for over 46 years as it was one of the first steel plate floating drydocks. It was in excellent condition when it was finally scrapped, due to its size, in 1938. This relates to the coating being perfect after a period of 46 years. The author, at one time, had in his possession a small piece which had been cut from this drydock, showing the absolutely superb condition of the coal tar enamel. Unfortunately, it has been lost in recent years.

In the wastewater\sewage field, coal tar enamels were originally used to protect the interior surfaces of steel sludge vessels, one of the earliest and most outstanding on record being the sludge vessels for Glasgow, Scot-

DRAFT

land in 1904. A study made after 38 years of service rated both the coating and the steel in excellent condition.

In New York in 1914, the first coal tar enamels were applied to steel water pipe. The City, after a period of a decade, checked these original water lines and determined all steel water lines subsequently placed within the New York water system would be coal tar enamel lined and coated. Due to the advent of coal tar enamel in the water industry, in 1933 the first wide range temperature coal tar enamel was applied to 80 and 96 inch steel pipe, three and one half miles, mostly above ground. In 1960 the line was inspected and found to be in perfect condition, an example of a 27 year history.

On the North American continent, one of the most outstanding applications of coal tar enamel is the Panama Canal gates and locks which were coated in 1915. Many of these original applications are still in place on the canal -- The author is confident many of you have observed these while passing through the Canal without even realizing you were looking at a historical event, not only a major feat of engineering in world history, but also the use of the basic coal tar enamel which has now lasted for a period of 72 years. Why has coal tar enamel generally been replaced on the Canal? It is obvious the advent of materials which are easier to apply have resulted in changes being made. Such irresponsible replacement, for incorrect reasons, will be a key discussion later during the presentation.

The varied exposures in application discussed show the versatility of coal tar enamels and

illustrate the fact the coatings are manufactured to meet specific exposures. Moreover, the experience gained extends over a far greater period of time than most protective anti-corrosive materials which are currently in existence. In other words, coal tar enamel does not need to prove itself -- it has already proved itself, in the stated examples, as the most outstanding water resistant coating ever formulated.

CALIFORNIA-NEVADA AWWA SECTION HISTORY

As previously stated, the original coal tar pitch enamels had a very limited service temperature range. However with the advent of plasticized enamel in 1933, the temperature ranges were extended from minus 20 degrees to as high as 160 degrees F. There have been other enamels in recent years which are now formulated to even greater temperature ranges. However, our interest is the water industry, so we will relate only to the plasticized AWWA enamel projects.

California had an opportunity in 1933 to be one of the first users of the new plasticized enamel on a major project, the Bouquet Canyon water line, a 96 inch spun lined pipe-line extending over the hills in what is now Canyon Country area. What makes the Bouquet Canyon water line unusual, is not necessarily the fact it was one of the first major projects to utilize plasticized coal tar enamel, but an unusual incident which occurred near the completion of the project. Due to the failure of an automatic air leak valve, a section of the Bouquet Canyon line collapsed while being emptied of water. Photographs and

reports indicate the top of the pipe was forced down to the bottom of the pipe, which then resembled an open flume. To reshape the pipe, water was forced back into the line under pressure, gradually rounding out the pipe to its original shape, except for a few areas which had to be cut out and replaced. The remarkable event here is that the coal tar enamel was damaged along only the very top of the pipe where enamel could be scaled off at the point of the collapse, with the rest of the enamel being as tightly bonded as it was before the collapse. This validates the tremendous adhesion and abrasion resistance exhibited by well bonded and properly applied coal tar enamel.

Another outstanding example of the abrasion resistance of coal tar enamel is the Los Angeles County Flood Control District Outlet Works of the San Gabriel Dam Number 1. The outlet lines which pass through the dam are composed of two 123 inch, one 96 inch and one 51 inch diameter steel pipes coated on the inside with centrifugally spun coal tar enamel lining. On March 2, 1938, Southern California experienced the worst storm in its records. The San Gabriel Dam, being partly filled with water from previous storms, was soon filled and overflowed its spillway. At that time the only installed outlet lines were the 51 and 96 inch pipes. The 51 inch line was completed and all joints patched. It had been discharging water under normal flow conditions since the previous November. The 96 inch line had been installed, but no field joint patching had been performed. To relieve the spillway, both lines were opened wide and allowed to discharge at their maximum capacity. At the

time of the flood, the intake tower had not been built, and all the debris which accompanies a flood run-off from the mountains passed through the pipes. The velocity through the 51 inch pipe was approximately 40 feet per second and about 60 feet per second for the 96 inch, velocities previously unheard of for coal tar enamel lined pipe. On entering the pipe it was expected most of the enamel would be found worn or peeled off by the terrific force and speed of such a mass of water, mud and debris; but no such thing had occurred. The only damage found was scarring, some broken patches of the invert, caused by the passage of rocks and some scouring in the hand daubed areas of the field joints which were rougher than the spun lining. The coal tar enamel lining was otherwise undamaged.

In relationship to the San Gabriel Dam pipelines, the author's firm represented the Los Angeles County Flood Control District in the 1986 rehabilitation of one of the lines noted in the above paragraph. The coal tar enamel, after 48 years, was only spot repaired due to its excellent condition. Justification could not be found to remove the enamel despite concerted reports by coating manufacturers to convince the District coal tar enamel was passe'. Many photographs of this project are on file. This is just another example of why coal tar enamel should always be considered for difficult projects where corrosion protection in water systems is required.

In recent years the author has represented many water agencies in performing field investigations and recommendations for rehabilitation of water tanks, pipelines

and related structures. There are many cases indicating the absolute success of coal tar enamel as compared to any other coating system on the market. These projects include two 150,000 gallon elevated tanks at the City of South Gate which are over 55 years old; had the coal tar enamel been maintained with any reasonable degree it would not have required replacement at this time. The difficult decision for the author was to determine if removal was the most economical, due to the excellent condition of a good portion of this enamel. However, when the damage or deterioration factor approaches 50%, economics would generally indicate the prudence of utilizing a new coating system, especially when considering the difficulty of applying enamel in elevated water tanks.

Another outstanding example is the one million gallon elevated water tank for the City of Santa Ana which was constructed in 1929. The first major rehabilitation of this tank interior occurred in 1967 and consisted of replacement of the coating system above the water level and patching of the coal tar enamel below the water level. Unfortunately, the patching of the coal tar enamel was poorly performed and the problems which existed at the original locations became a problem in the same general areas. When the author's firm investigated this tank and prepared specifications for the City of Santa Ana, it was another South Gate type decision - should the enamel be merely patched and overcoated or should it be removed? Considering the fact the age was now approaching 60 years, it was finally determined the coating system should be replaced. Again, please note had

any degree of reasonable maintenance been performed on the coal tar enamel coating, it would not have required replacement.

The City of Merced also has several elevated water tanks constructed between 1917 and 1951 which were coated with coal tar enamel. The author examined these tanks approximately nine years ago, and again, it was a difficult decision to determine whether the coal tar enamel should be patched or removed. Again, the decision was rendered to remove the enamel in three of the four elevated water tanks due to the fact no maintenance had ever been performed and original application flaws had exacerbated the defects in the coating in too great an area to warrant its retention. However, a fourth tank, which was constructed in 1951, still remains in service with coal tar enamel in excellent condition.

In addition to these outstanding elevated water tank projects mentioned in the previous paragraphs, there are literally hundreds of ground tanks and reservoirs which have been coated with coal tar enamels for periods ranging back as far as 60 years. The 60 year range includes some of the tanks belonging to the Department of Water and Power of the City of Los Angeles. The advent of VOC testing in August 1982, enabled a survey of water tanks to be conducted by the Department of Health Services in California. This survey showed over 85% of all steel water tanks in California were coated with a combination of coal tar enamel and solvent cutback coal tar products. Accordingly, many projects are available to validate outstanding coal tar enamel histories.

DRAFT

**CURRENT COATING SYSTEMS UTILIZED
WITHIN THE CALIFORNIA-NEVADA
SECTION**

Until the last three years, over 85% of all steel water tanks and reservoirs in California were coated with a combination system of solvent cutback coal tar coatings above the minimum water level and coal tar enamel below the water level. In the past three years, polyamide epoxies have begun to replace the solvent cutback coal tars as the epoxies have now been on the market for approximately 30 years with an outstanding record in water service and more severe environments. Of lesser use, but still found in some areas, the Bureau of Reclamation's VR 3 Vinyl Resin System is utilized instead of the solvent cutback coal tar or epoxy coating systems in areas above the minimum water level. In addition to these combination systems, another 10%-to 15% of the tanks have been coated solely with one of the three systems, that is, the coal tar enamel has been deleted from the tank and the tank contains only one interior coating system.

One of the principle reasons for the presentation of this technical paper is the recent advent of tremendous efforts by coating manufacturers, coating contractors and tank fabricators to delete coal tar enamel from use in water tank interiors. This is not for technical reasons, but merely a business maneuver on the part of these organizations. For example, the fabricators are now moving toward installation of facilities for wheelabrating the steel and applying primers in the shop and performing field touch-up and finish work in the field only.

This is an acceptable move because quality standards can be very high if offsite inspection is maintained and field work is accomplished, under a specification designed specifically for shop priming projects.

Naturally, the fabricators are delighted with this arrangement as it removes approximately 40% of the subcontract cost for painting from the painting subcontractor to the fabricator himself. The fabricators find the use of coal tar products to be more difficult and incongruous with their shop operations, so they are naturally trying to specify systems which lend themselves to their plant operations. However, I challenge each of them to convince me they have done this on anything other than a self-serving monetary basis. What I am stressing here is the fact we are deleting (or attempting to delete) coal tar enamel when it is the most proven and economical product available in the world today for immersed service in water tanks or pipe lines.

The only domestic services of coal tar enamel are the Koppers Company, Inc. and Rielly Tar and Chemical of Indianapolis, Indiana. With the closure of the Koppers plant in Fontana, there no longer is a west coast source of coal tar enamel; all enamel is now shipped from midwestern or eastern points. However, the cost of bringing the coal tar enamel into the local area still enables the system to be applied at a price competitive with other systems, especially when one considers the service life rendered by the product.

Another demise of coal tar enamel on the current market is the preponderance of coatings manu-

DRAFT

facturers selling other products on the Section market. Of course, no detective agency is required to determine they have no coal tar enamel and want to sell their own products. Accordingly, they have mounted a strong campaign to replace the coal tar enamel. Again, I recognize this as a straight business ploy, but as an independent corrosion engineering consultant and an officer of the California-Nevada Section, my concern is with the end user, the Water Agencies. If economics play a part of the decisions regarding the coating system selected for a specific project, so be it. However, decisions made solely on the basis of economics for the manufacturer of the product are not in the best interests of the owner and definitely sells the owner's water system short.

The third arena of opposition to the use of coal tar enamel is from two classifications of tank coating contractors who specialize in application of coating systems to steel tanks. There are numerous tank coating contractors who perform work within the general industrial field, principally the petrochemical and power industries, who have never applied coal tar enamel and have no crews or equipment to do so. Accordingly, they are beginning to look toward the water tank field as an arena of additional work and they, of course, are siding with the tank fabricators and the coating manufacturers in writing specifications which include systems more easily applied than coal tar enamel. In other words, they want to apply materials for which they have equipment and qualified personnel.

The tank coating contractors who specialize in waterworks projects

have not continued to train men in recent years, so they have reduced the number of personnel with the ability to properly apply coal tar enamel. Accordingly, they too are now vacillating and forgetting the protection they received from the general painting industry by the use of coal tar enamel, by joining the tank fabricators and coating manufacturers in trying to specify single systems on the interior, and deleting the coal tar enamel.

COST AND LIFE EXPECTANCY OF CURRENTLY USED CALIFORNIA- NEVADA COATING SYSTEMS

EPOXY COATING -- Epoxy coatings were formulated for the commercial market approximately 30 years ago and have gained their greatest prominence within the last 15 years. The original usage for the epoxy systems was within the petrochemical and power industries, due to their more severe environments. There are billions of square feet of epoxy systems throughout the world with outstanding case histories. Epoxies have been utilized in the water industry within only the last 10 to 15 years, first on the east coast and the midwestern United States with only minimal usage in the western United States. In recent years epoxy products have become the major materials being specified for areas above the minimum water level in steel water tanks. Results to date show outstanding applications and it is anticipated a properly applied water tank system with minimal maintenance should obtain a 25 to 30 year service life. There is a possibility the service life may be as great as 35 years.

The epoxy systems are more difficult to apply than a single solu-

DRAFT

ion product as it is essential the ratio be maintained of the different components and the mixing be absolutely exact with that originally specified by the formulator. Any deviation in the ratios or mixing procedures of epoxies will result in projects which will fail long before their excellent life expectancy is reached. Most of the tank coating contractors are now qualified to apply epoxy coating systems and have equipment which performs the work proficiently. Due to the technical aspect of the coating, it is absolutely essential a full time inspection criteria be developed to insure all of the technical facets of epoxy mixing and application are performed properly.

SOLVENT CUTBACK COAL TAR COATINGS

-- This category of coatings, commonly known as "super tank" type coatings, has been in use since their original formulation in the late 1950's. As noted in the Department of Health Services survey after August 1982, the survey indicated 85% of all water tanks in California generally contained this type system in the upper areas above the minimum water level. The service life of this system with only minimal maintenance is anticipated to be 20 years. The intent of the original formulator, the Koppers Company, was that a touch-up and full refresher coat would be applied at a 10 to 12 year interval, which would enable the solvent cutback coal tar system to have an indefinite service life. Unfortunately, the author knows of few cases where this has transpired, so the coating systems have been allowed to reach their final demise through embrittlement as they approach the 20 year mark.

This is unfortunate as this system could have been extended over a greater period of years and the coatings would not have some of the negative connotation due to premature failures. In other words, this coating system has taken many "bum raps".

With the advent of volatile organic compound (VOC) testing by the Department of Health Services after August 17, 1982, the super tank type coatings were required to be reformulated, to remove all perchlorethylene (PCE) from the systems. This was necessary as the four parts per billion action level established by EPA and utilized by DOHS were so miniscule it was almost impossible to obtain an end result which would pass the stringent Health Department requirements. Any time an ingredient in a coating is changed, it constitutes reformulation and it is the author's opinion a certain amount of testing should be performed to observe the reaction of this coating in environments where it had been previously successful. There is no preponderance of evidence to indicate the reformulated super tank type coatings will not perform adequately as have their predecessors. However, there have been numerous negative phenomena which have occurred with the new products which did not occur with the original products. This leads the author to believe the reformulation may affect the longevity of the systems. These statements intend no direct harm to the manufacturer's products or to the sale of this generic category. As an independent corrosion engineering consultant, I am obligated to report what I see to my clients and what I see has created some concern on numerous occasions.

DRAFT

VINYL SYSTEMS -- VR 3 vinyl systems consist of four 1 1/2 mil coats of vinyl chloride vinyl acetate copolymer materials applied to a total dry film thickness of six mils. These systems have been on the market for approximately 40 years and where applied properly, have performed outstanding service. The key to success -- "applied properly". The low solids, usually 20% to 25%, necessitates extreme care in application as the build-up of dry overspray, due to the nature of the vinyl resin and the high flash solvents, constitute a grave danger to the ultimate success of the coating system. Successful vinyl coating systems have been applied, but they require sanding or brushing down the complete previously coated surface before applying subsequent coats. Ultimately, the coated surface needs to be electrically detected with low voltage to insure no voids are present. Project longevities in excess of 30 years are not uncommon in the California-Nevada Section. In general, vinyls have gained a bad name due to the advent of the so called "high build" vinyls which were used extensively in the late 1950's and up to the early 1970's.

High build vinyl formulations were "overfilled" and were poor technology, resulting in extreme porosity of the coating and failure of the majority of the projects where they were applied. Unfortunately, hundreds of tanks were coated utilizing this system of "advanced" vinyl technology before it was realized the coating systems had serious flaws. However, the VR 3 vinyl systems continue until this day to be an outstanding selection for coating steel water tanks. The problem is

they are labor intensive due to the multiple coats and the necessity for total removal of all overspray between each coat. Selection of these systems would be ranked behind the previously noted systems, for the stated reasons.

OTHER COATING SYSTEMS -- Well over 95% of the tanks in the California-Nevada Section are coated with one of the three previously mentioned coating systems. However, there are occasional projects where other type coating systems have been applied due to the desire of the owner to try something new (usually accompanied by a hard press sale of a coating manufacturer) or the consulting engineering firm emanating from an area in the United States where other systems are used. The following systems fall within this category:

1. 100% Solid Polyurethane Elastomeric Coatings -- These systems are outstanding for extreme corrosive environments, but are considered by the author to be "over kill" for use in water tanks. However, selection of their use would in no way detract on the potential longevity of the tank.
2. Coal Tar Epoxy Coatings -- These systems have had excellent success in water service, due to the combining of the excellent properties of coal tar and epoxy systems. However, difficulty in application and general non-acceptance by most water agencies has precluded their use on a large scale. These systems would probably perform at least as well as the super tank systems and very possibly

DRAFT

as well as the vinyl and epoxy systems.

3. Coal Tar Urethane Coatings -- These systems appeared first on the market in the late 1950's and early 1960's, but were removed due to the difficulty in application. However, the few projects which utilized these coating systems have rendered outstanding service. The move is now afoot to develop coal tar urethanes which will not have the same application disadvantages as the original ones.
4. Single Solution Epoxy Coating Systems - These systems gained some prominence approximately a decade ago, but their longevity has proved to be far short of the service life rendered by all of the previously discussed systems. Selection of this system would not be in the interest of any water tank owner.
5. Miscellaneous Coating Systems In addition to the systems mentioned above, there are numerous systems which manufacturers "push" from time to time because they are attracted by the volume of business available to them in the water industry. However, their service life is usually very limited and an agency owner would be very unwise to select systems which do not have outstanding records such as some of the previously discussed systems.

CASE FOR COAL TAR ENAMEL

We have examined all of the systems which are used within the California-Nevada AWWA Section, so

let us now take time to delve into the current status of coal tar enamel as a water tank protective coating within the Section.

The most misstated fact regarding coal tar enamel is that it will leach volatile organic compounds into the water which will then cause the water to fail the retention testing mandated by the Department of Health Services. Please remember, coal tar enamel is a 100% solids material, having no solvents, being reduced to a liquid state by the application of heat within the range of 450 to 490 degrees F. Accordingly, coal tar enamel has no leachates and there is no danger whatsoever at this time nor will there be any future leaching of volatile organic compounds into water where coal tar enamels have been applied.

Other frequent misstatements regarding the use of coal tar enamel relate to OSHA and APCD. As regards OSHA, coal tar enamel has clearly delineated safety practices which are to be utilized during its application. Coal tar enamel is not considered any more a hazard in 1987 as it was when it was originally formulated and utilized more than 100 years ago. In fact, current OSHA regulations are simple enough to follow; the contractor loses very little time in his compliance with them.

The Air Pollution Control Districts of California and Nevada have very clear regulations regarding use of coal tar enamel. This principally deals with emission of enamel smoke to the atmosphere. The current kettles must meet the OSHA/APCD requirements for safety and health, which include the manner in which smoke is handled and emitted to the

DRAFT

atmosphere. To this date, there have been no serious problems, even in congested areas, with the use of coal tar enamel. Good scheduling and planning by the contractor/ owner can result in a project which will have no safety or health hazards involved.

One of the great "scares" which existed during the 1970's and early 1980's was the fact coal tar based coatings were going to be outlawed by the Environmental Protection Agency and all health departments throughout the United States. Unfortunately, this rumor still exists today and is exactly that -- a rumor! Coal tar enamel is on the current "Drinking Water Additives List" published by the EPA and utilized by the California-Nevada Departments of Health. Additionally, there is no move by any governmental agency to forbid the use of coal tar enamel. Remember, coal tar enamel starts out in a solid state and is only reduced to liquid only by heating, which means no solvents are present which would constitute the problems predicted by so many people.

As regards the carcinogenic aspects of coal tar pitch, it has been a common knowledge since the early part of the century, coal tar pitch contains certain carcinogens. However, the many moves throughout the United States to prove coal tar base coatings will produce cancer or cancer related diseases in human beings has never been substantiated beyond that which has been induced in laboratory animals. To the author's knowledge, there is not one written case within the United States where a person has contracted cancer or its related diseases as a result of ingesting water from a tank or pipeline

coated with coal tar enamel. I would encourage every owner and consulting engineer within the Section to immediately look with great disdain upon anyone who misrepresents the facts as stated herein. In other words, for your own protection -- don't do business with a person who would misrepresent the facts in such a manner.

One of the other inherent characteristics coal tar enamel is its ability to withstand service within 60 seconds after application. Once the material has chilled from its minimum application temperature of 450 degrees F., it is ready for service. There is no curing period and it can be walked upon, scaffolds can be rolled upon it and it can take great abuse. The abuse factor is well documented by the previously noted San Gabriel Dam penstocks and the Bouquet Canyon pipeline projects. This instantaneous cure means the tank can be placed into service immediately upon completion of the coal tar enamel. Unlike all of the solvent base coating systems, there is no curing/waiting period. Accordingly, there is no reason to ever coat a steel water tank on the bottom with anything but coal tar enamel. Every other coating system utilized, and I am speaking of the epoxies, vinyls and super tank type products, require extended curing periods especially during lower temperatures during winter months. The ground temperature remains a constant 58 to 60 degrees F., plus heat rises, which means even when the other materials are curing in upper areas, the solvent based coating system applied to the bottom is not curing. This problem is totally eliminated with the coal tar enamel. Users -- why would

- 11 -

DRAFT

you even consider deleting coal tar enamel from your tank bottoms when the cost is almost identical to that for the epoxy, vinyl or other type systems available, when you have the fact of instantaneous cure and the incredible longevity which is inherent to coal tar enamel.

SUMMARY

The case for coal tar enamel has been well presented and documented within this paper. I would like to again review certain salient

facts regarding the use of protective coating systems in steel water tanks within the California-Nevada AWWA Section:

1. Use of a solvent base protective coating above the bottom or in some cases, the minimum water level, has an unparalleled success history within the Section.
2. Epoxies, solvent cutback coal tar coatings or vinyl coatings are used extensively above the bottom or minimum water level.
3. Other coating systems have been used with varying degrees of success.

PLEASE NOTE: This paper was almost completed prior to Bill Harper's unfortunate accident. We have arranged it in as complete form as possible without his assistance. We have also stamped each sheet "DRAFT" since it cannot be completed until he can work with it. We thank you for your concerns for Bill. On October 28 (as of this date), he has just returned from what we hope is his last surgery and his doctor tells us that went well, with no problems.

Michael Harper

Exhibit 57

California Department of Health Services
Public Water Supply Branch
Annual Inspection Report

Purveyor: City of San Bernardino System No.: 36-039
Person(s) contacted/Position: Michael Lowe, Water Utility Operations
Superintendent, Fred Ehemann, Joe Stejskal, Director Engineering.
Date of Inspection: April 25-29, 1988 Reviewing Engineer: W.C. Gedney
Last A.I. Date: October, 1984 District Engineer: Diana Barich

New York

A. INTRODUCTION

1. Permit Status (Date Issued / Amendment Purpose)
Full: Full permit dated October 22, 1964
Amendment(s): 4-23-82, 7-11-86, 8-14-86, 4-1-87
Are the permit provisions complied with? Yes
Is the permit up-to-date? Recent application dated 4-7-88 needs to be acknowledged.
2. Changes in System
a) Since last annual inspection: (1) New aeration treatment facilities completed at Newmark plant; construction starting at Waterman plant. (2) Cajon Infiltration gallery permanently removed. (3) Devil Canyon filters and infiltration gallery revamped. (4) Systemwide chlorination capability achieved.
b) Planned future changes: Provide pretreatment of Devil Canyon surface water treatment plant. Provide aqueous carbon treatment for 16th and 17th street wells.
3. Consumer and Production Data
No. of service connections: 35,241 No. with meters: 35,241
Approx. population served: 110,000
Water produced during recent 12 mo. period:
(1/87 to 12/87) 13,544.446 MG
Maximum month: August / 1570.302 MG
Maximum day : / 59.088 MG
Maximum System Flow : 41,033 GPM/ 1,676 gpd per service conn.

B. SOURCE DATA

Sources	Status	Capacity	Comments
a) Groundwater - 40 wells total.			See data sheets
b) Surface Water			
Devil Canyon	Active	4.4 MGD	See data form attached.
c) Connections with other systems			
Colton	Standby	8"	Not active
Victoria Farms	Standby	3"	Not active
Baseline Grdns	Standby	4"	Not active
S.S.B.C.W.D	Active	3"&4"	Cooperation limited
Loma Linda	Active	8"	For Blending
E.V.W.D	Active	8"&12"	Exchange
Riverside City	Active	12"	Exchange
W.S.B.C.W.D	Standby	12"	Exchange

PAGE 1

EXHIBIT 346 501
IDENTIFICATION
KELLY, C. 1999
6-1-99
Dep: Pedroza
(TK)

Are all data sheets completed/on file? Yes - both paper and computer
Discussion and Appraisal: (i.e., Does source capacity comply with
Waterworks Standards?) YES

C. TREATMENT

1. Surface water sources / Watershed

Are there significant sewage hazards? Yes - Cedarpines Park Area.
Is there significant recreation? Only hiking.
Has a sanitary survey been conducted? (survey results) Fred conducted a partial sanitary survey. An updated survey should be made and PWSB staff should be present.
Treatment classification: Complete treatment needs to be provided.
Describe treatment process: (i.e., chemicals, dosages, flocculation and sedimentation contact time, filter media, media depth, alarms) After intake, pressure filtration and reliable chlorination is provided. Continuous chlorination and turbidity recorders are provided on both influent and effluent lines.
Is filter to waste provided? Yes - It's provided but is not wholly effective as evidenced by turbidity spikes after backwash.
Is reclaimed backwash water returned to headworks? Treatment and settling time provided: Not returned.
Are design criteria met? If not what facilities are needed? YES
Are performance standards met? Meet standards even without Pretreatment facilities.

Turbidity: < 0.3 ntu 50% < 0.5 ntu 95%

Sampling: Continuous and grab samples taken

Where is turbidity sample collected? (must be before clearwell) Continuous recorder samples after filtration and prior to filtration. Finished water supply turned out at 0.7 ntu. Alarm sounds at 0.5 ntu only. Raw water >10 ntu is automatically dumped.
Are operation criteria met? (i.e. filt. rate, operation plan, etc.) Yes

Are reliability criteria met? Yes - Automatic shutdown facilities
For Controlled Watershed: N/A

alarm

standby replacement

For Uncontrolled watershed:

alarm

standby replacement

redundent backup

standby power

Disinfection of surface water sources

Type: Chlorine gas, both pre and post treatment

Capacity: 100 pounds per day each

Standby feeders: Yes

"ct" values: residuals 0.5

time 240 minutes

ct ranges from 109-125

pH range 8.0 to 8.2

temperature range 50 to 65 degrees Fahrenheit

Comments: May need a rate of flow controller for the filters due to turbidity spikes

City of San Bernardino Survey

Are distribution residuals > 0.2 mg/l 95%? Yes

Alarms: Low residual and high turbidity

Discussion and appraisal: Pretreatment facilities need to be provided for this plant. City has already put out an RFP for this.

2. Groundwater Sources

Is continuous disinfection provided? For the Antil Wells and Lytle Creek well. Emergency facilities are provided for all wells
Describe facilities: Reliable gas chlorination facilities. Emergency chlorination facilities are a combination of gas and hypochlorination units. All wells are provided with taps.

If disinfection is not provided, are provisions and connections for emergency chlorination provided per PWSB guidelines? YES!

Discussion and appraisal: Bacteriological contamination incident during 1987 led to the development of a comprehensive chlorination policy and plan which is currently being implemented.

3. Other treatment or blending facilities

Describe facilities and parameter treated/blended: (i.e. iron and manganese, fluoridation, nitrate, corrosion control, organics, etc.) The City recently completed construction of a 8.6 MGD aeration treatment plant at the Newmark site and will initiate construction on an 11 MGD aeration plant at the Waterman site. Both plants are designed to strip TCE, PCE and several minor VOA's from contaminated groundwater. The City recently applied for an amended permit to provide aqueous carbon treatment at the 16th and 17th st. wells as these wells continue to show increased levels of TCE.

Discussion and appraisal: Extensive documentation in the form of Pilot studies is available. All facilities under permit.

4. Required level of operator certification and is the utility in compliance? Minimum grade 2 required. In compliance

Are all T.P. data sheets completed and on file? YES

D. STORAGE DATA

Describe or tabulate storage facilities: See data sheets (i.e.- example)

Reservoir No.	Type	Capacity	Zone	Comments
Devore	Steel	2.0 MG	14	See Data Sheet
Meyer's Cyn	Steel	0.21 MG	14	" " "
Cañon	Steel	5.0 MG	13	" " "
Palm Ave. 1	Steel	0.33 MG	12	" " "
Palm Ave. 2	Steel	5.0 MG	12	" " "
College	Steel	2.58 MG	12	" " "
Devil Cyn	Concrete	0.22 MG	WTPCW1	" " "
Sycamore 1	Steel	2.5 MG	11	" " "
Sycamore 2	Steel	0.45 MG	11	" " "
Mountain 1	Concrete	0.22 MG	10	" " "
Mountain 2	Steel	2.0 MG	10	" " "
Ridgeview	Steel	0.33 MG	9	" " "
Daley	Concrete	1.25 MG	8	" " "
Quail Cyn 1	Steel	0.08 MG	8	" " "
Quail Cyn 2	Steel	0.08 MG	8	" " "
Del Rosa 1	Steel	0.46 MG	7	" " "
Del Rosa 2	Steel	0.19 MG	7	" " "

City of San Bernardino 8 Survey
D. STORAGE DATA (continued)

Reservoir No.	Type	Capacity	Zone	Comments
Del Rosa 3	Steel	3.0 MG	7	" " "
Shandin Hill	Steel	0.005 MG	6	" " "
Newmark 2,3,4	Concrete	21.9 MG	5	" " "
Electric Dr.	Concrete	8.0 MG	5	" " "
Perris Hill	Concrete	10.0 MG	4	" " "
Lytle Crk 1,2	Concrete	11.0 MG	1	" " "
Waterman Av.	Concrete	10.0 MG	1	" " "
Terrace 1	Steel	1.25 MG	2	" " "
Terrace 2	Steel	1.32 MG	2	" " "
Terrace Elev.	Steel	0.10 MG	3	" " "
Mallory	Steel	0.169 MG	M	" " "
No. E St.	Concrete	0.122 MG	W23&25	" " " 2
27th & Acacia	Concrete	0.247 MG	27th	" " " 2
Perris Pl.	Concrete	0.407 MG	P3,4,5	" " " 2
Antil Pl.	Concrete	0.258 MG	P4,5,6	" " " 2
Lynwood Pl.	Concrete	0.223 MG	Lyn W	" " " 2
Gilbert Pl.	Concrete	0.108 MG	Gilb W	" " " 2
7th St. Pl.	Concrete	0.101 MG	7th W	" " " 2
17th & Sierra	Concrete	0.108 MG	16&17W	" " " 2
30th & Mt.	Concrete	0.097 MG	30&31W	" " " 2
19th St. Pl.	Concrete	0.101 MG	3 well	" " " 2
Mill & D Pl.	Concrete	0.437 MG	1 well	" " " 2

Notes: 1 - Water Treatment Plant Clear Well
2 - Receives water from well and serves as forebay for booster

Does storage capacity comply with Waterworks Standards? Yes
Are all data sheets completed and on file? YES (will be very soon)
Are PWSB coating procedures adhered to? Yes
Discussion and Appraisal: (i.e., Were reservoirs coated last year and are there plans for future recoatings?) Several reservoirs need to have an evaluation of their internal coating made. The City has an ongoing reservoir renovation program.

E. DISTRIBUTION SYSTEM

1. Pressure Zones

Describe or tabulate:

(i.e.-example)

Pressure Zone Name	Pressure Range (psi)	Source Production (wells, p.sta, etc)	Storage Capacity	#of People Served
1 - Lower	30 - 110	21.0 MGD	21.0 MG	
2 - Terrace	40 - 90	1.6 MGD	2.57 MG	
3 - Terr Elev	55 - 75	"	0.10 MG	
4 - Inter	25 - 120	5.0 MGD	10.0 MG	
5 - Upper	45 - 110	33.0 MGD	29.9 MG	
6 - Shandon	30 - 105	1000 cpm	5000 gals	
7 - Del Rosa	40 - 110	2.5 MGD ¹	3.65 MG	
8 - Daley	80 - 130	1.5 MGD ¹	1.25 MG	
9 - Ridgeview	60 - 125	0.7 MGD ¹	0.33 MG	
10 - Mountain	30 - 140	1.5 MGD ¹	2.23 MG	
11 - Sycamore	55 - 120	6.0 MGD	2.95 MG	
12 - College	40 - 120	3.8 MGD	2.58 MG	
13 - Cajon	60 - 140	6.4 MGD	5.33 MG	

PAGE 4

City of San Bernardino Survey

1. Pressure Zones

(i.e.-example)

Pressure Zone Name	Pressure Range (psi)	Source Production (wells, p. sta, etc)	Storage Capacity	#of People Served
14- Devore	40 - 120	5.54 MGD	2.0 MG	
Mallory	77	1.2 MGD	0.17 MG	

(Complete Waterworks Standards evaluation for systems which have documented water outage or low pressure problems). Meets Standards

2. Mains:

Describe or tabulate: See attached pipeline summary.

3. Discuss leak history during past 12 months:

History is excellent. City relies upon leak summary to schedule main replacements.

4. Are distribution facilities constructed in accordance with Waterworks Standards? Yes

5. Describe water main and sewer line/sewage disposal separation practices: City follows Waterworks Standards to the letter and also adheres to Guidelines when necessary.

6. Does the system have low head lines and what is their program to eliminate them? No low pressure lines in the system

7. Extent of lead pipes, joints, and/or lead solder used in distribution system and present policy: There are 206 suspected services which have lead loops. These will be eliminated.

8. Discussion and Appraisal: During the survey, Joe Stejskal requested that PWSB outline a lead monitoring program. They have routinely collect 5-30 samples per month since January. All results were below the detection level for lead.

F. TRANSMISSION FACILITIES

Describe transmission facilities: Main transmission line from Cajon is provided with Cogeneration facilities to generate power and reduce pressure. All transmission lines meet Waterworks Standards.

Discussion and appraisal: Lines are in good shape.

G. WATER QUALITY AND MONITORING

1. Bacteriological (Distribution and Sources)

Description of program: City follows an approved Water Quality Monitoring program to ensure compliance with all applicable standards and action levels. The plan is periodically updated and a copy is in the file.

Compliance and Appraisal: This program meets all standards

2. Chemical (Sources)

Description of program: See above.

Compliance and appraisal: The program is exemplary

3. Other Organics

Description of program: AB 1803 followup program ongoing.

Compliance and Appraisal: In full compliance. Program has detected levels in 16th and 17th st. wells which will require treatment.

4. Trihalomethanes

Description of program: The City conducts THM monitoring of their

PAGE 5

City of San Bernardino Survey

Devil Canyon, Cajon Wells and Lytle Creek Well. All results are consistently below the MCL.

Compliance and appraisal: Ongoing THM Monitoring will continue but modification of the program will be necessary when the Newmark and Waterman Treatment systems are placed in service. PWSB will advise

5. Additional Monitoring

Description of Program: (Physical quality of distribution system, corrosion, lead monitoring, etc.) See above.

Compliance and appraisal: In full compliance.

6. Is an approved water quality monitoring plan on file? (i.e., Briefly summarize plan and needed additions) Yes! This plan serves as an example of an acceptable Water Quality Monitoring Plan.

H. OPERATION AND MAINTENANCE

1. Personnel and Planning

Are system improvements made in accordance with the Waterworks Standards? (WWS) Yes

Has a master plan for the system been developed? Yes Date: 1981 (i.e. obtain copy for PWSB)

Does the utility have up-to-date distribution system maps? Yes (i.e. obtain copy for PWSB)

Is up-to-date copy of system schematic on file: Yes

List or tabulate certified personnel: City has a numerous list of certified personnel. They have also initiated a program for training numerous water treatment personnel area-wide.

2. Cross-Connection Control Program

(See attached survey form)

Name of cross-connection control inspector(s): Kevin Fisher runs the program and the City has several qualified testers.

Discussion and appraisal: Program is effective and complies with the new standards. Acceleration of the reevaluation portion of the program may be needed.

3. Complaints

Discuss complaint program: There are very few complaints in this system. Consist primarily of air and general water quality ques.

Discussion and appraisal: Very few complaints and those received are responded to promptly.

4. Emergency Response

a) Is up-to-date emergency notification plan on file: Yes

b) Notification of PWSB of significant system problems: (i.e. outage, contamination, significant rise, etc.): Yes

c) Emergency response plan: Comprehensive Plan formulated and on file. This plan is updated annually.

d) Discussion and appraisal: The emergency response plan has had "luxury" of being tested "under fire" during the 1980 fire and weaknesses detected were corrected.

5. Main Disinfection Program

Describe main disinfection program: (i.e. method, contact time, chlorine residual, bacti tests, records) Follows AWWA Standards

Does the main disinfection program comply with AWWA specifications?

Yes

Discussion and appraisal: Meets all Standards

6. Valve Maintenance Program

Describe program: New program initiated this year to excersize all Valves in system (New mechanically operated truck mounted device - Humanoid operators not provided so they will be supplied from existing, indigenous City forces).

Is number and location of valves satisfactory? (i.e. mainline, ARVR, blowoff valves, etc.) YES

Discussion and appraisal: (i.e. Are valves recorded on maps available to field crews? Are all valves located with valve covers raised to grade?) Yes.

7. Flushing

Describe flushing program: (i.e. dead ends, records, etc)

Routine system flushing performed and records kept. (Kathy Rhodes).

Approx. No. of dead ends: >50 % equipped with flushing valves: 100

Discussion and appraisal: All hydrants are flushed annually and select valves are excersized on a monthly basis.

I. OVERALL SYSTEM APPRAISAL This system has suffered extensive loss of critical production facilities and has been able to obtain funding to provide required treatment facilities. It is very well operated and maintained, however, additional VOA removal facilities are needed and and surface water pretreatment facilities must be provided in a timely manner.

J. APPENDIX

Deficiency list (see letter)

Cross-Connection Control Survey Attached

Optional attachments

System schematic

Data sheets (Under Preparation)

Annual report

Log of source sampling data

Bacteriological Summary

Updated Emergency Notification Plan

Summary of water quality monitoring plan

Report prepared by

William C. Harvey 5-1-88
Signature Date

State of California
Department of Health Services

BACTERIOLOGICAL ANALYSES SUMMARY

System Name: City of San Bernardino Municipal W.D. No. 36-039
Analyses performed by: Clinical Laboratory of San Bernardino

MONTH AND YEAR	# SAMPLES TESTED	# PORTIONS CONFIRMED	% PORTIONS CONFIRMED	THREE OR MORE TUBES CONFIRMED	
				PERCENT	NUMBER
JANUARY	144	2	0.278	0	0
FEBRUARY	164	0	0	0	0
MARCH	147	1	0.136	0	0
APRIL	145	1	0.138	0	0
MAY	131	14	2.137	3	2.29
JUNE	144	1	0.139	0	0
JULY	144	1	0.139	0	0
AUGUST	145	6	0.827	1	0.69
SEPTEMBER	144	0	0	0	0
OCTOBER	127	2	0.315	0	0
NOVEMBER	147	0	0	0	0
DECEMBER	156	3	0.385	0	0
TOTAL	1,738	31	0.357	4	0.23

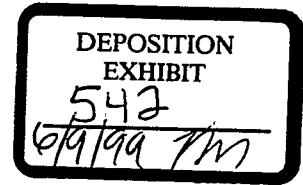
COMMENTS: Every active well is sampled weekly as is the Devil Cyn WTP. All zones are sampled every week.

RECEIVED

MAY 28 1992

CA DEPT. OF HEALTH SVCS.
OFFICE OF DRINKING WATER

MUNICIPAL WELLHEAD TREATMENT
A WATER DEPARTMENT'S PERSPECTIVE



Joseph F. Stejskal
San Bernardino Municipal Water Department

Presented at
Environmental Management in California
15th Annual Conference

April 1992
Los Angeles, California

Exhibit 58

MUNICIPAL WELLHEAD TREATMENT
A WATER DEPARTMENT'S PERSPECTIVE

Joseph F. Stejskal
San Bernardino Municipal Water Department

Presentation Outline
Environmental Management in California
15th Annual Conference

April 1992
Los Angeles, California

- Introduction
- Preliminary Site Assessment
- Geology
- Description of Plume
- Alternative Wellhead Treatment Processes
- Air Modeling - Health Risk Assessment
- Community Awareness
- Permitting Requirements
- Project Funding
- USEPA Site Designation
- Conclusion

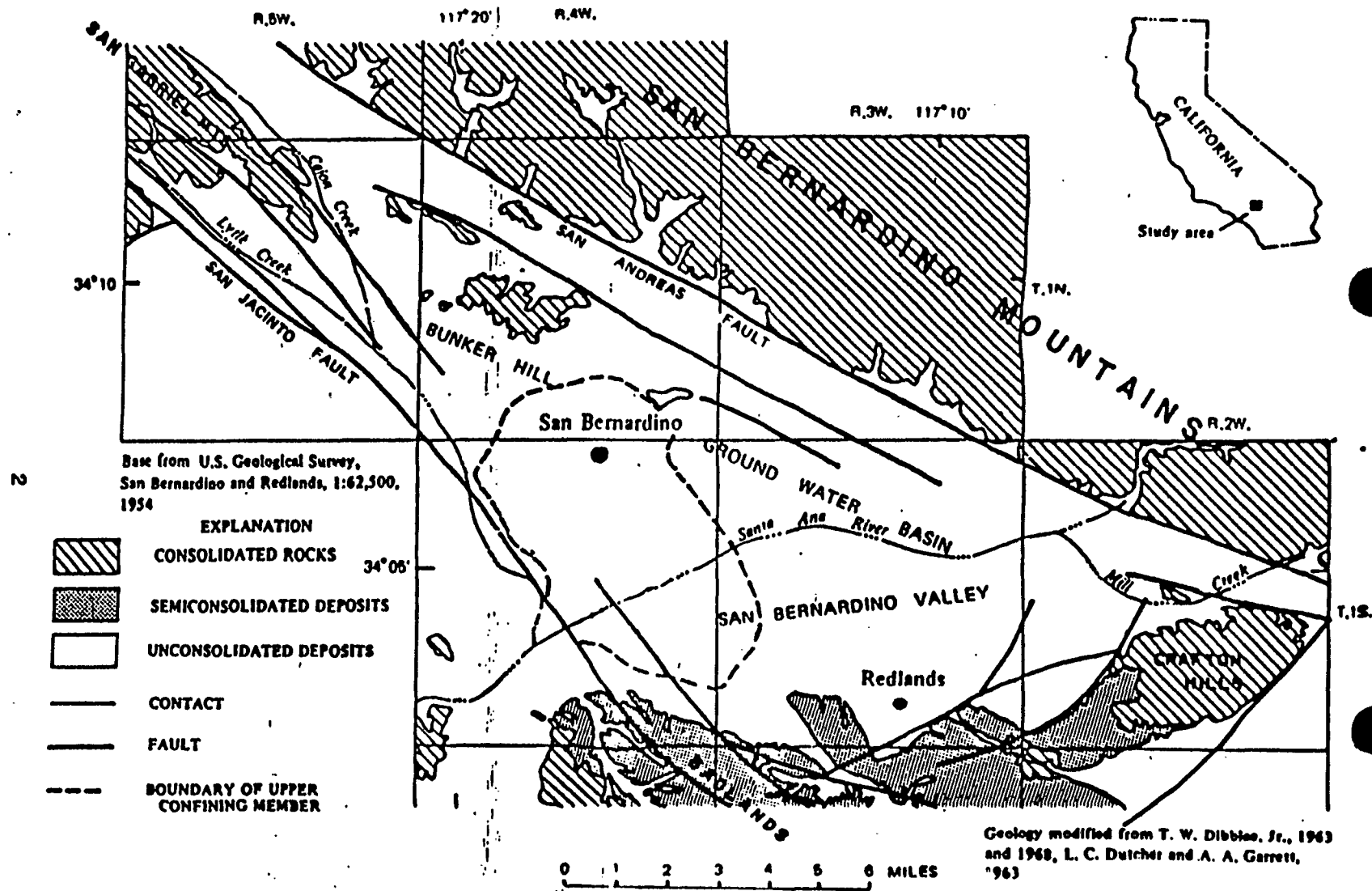
INTRODUCTION

The San Bernardino Bunker Hill basin contains 5 million acre-feet of groundwater which serves as the primary source of domestic water for 600,000 residents of the cities of San Bernardino, Riverside, Loma Linda, Grand Terrace, Redlands, Highland, Yucaipa, and much of the unincorporated areas within the boundaries of the San Bernardino Valley Municipal Water District.

Groundwater contamination in the northern San Bernardino area was first detected in 1980 by the Department of Health Services, Office of Drinking Water (DHS-ODW). Eight San Bernardino Municipal Water Department (SBMWD) production wells were found to contain levels of Trichloroethylene (TCE) and Tetrachloroethylene (PCE) exceeding the state drinking water action levels (5.0 ug/l for each). Four of these wells were in the Newmark well field located in north San Bernardino, and the other four were in the Waterman well field two miles downgradient. As a consequence of the contamination, pumping was discontinued at both well fields resulting in a loss of approximately 25 percent (23 million gallons per day [mgd]) of the SBMWD's supply. A more extensive groundwater sampling program was initiated by the Regional Water Quality Control Board (RWQCB), Santa Ana Region, and the DHS-ODW to closely monitor groundwater quality in the San Bernardino area. This program discovered TCE and PCE in eight additional wells in quantities high enough to necessitate eventual shutdown and/or severely limited operation. The pattern of groundwater contamination suggested relatively rapid southward (downgradient) migration of TCE and PCE which, if left unchecked, could pose a significant threat to additional downgradient production wells. The City of Riverside and other communities obtain most of their public water supply from these endangered wells.

PRELIMINARY SITE ASSESSMENT

In September 1985, the RWQCB, Santa Ana Region, authorized the URS Corporation to study the local hydrology and ascertain contaminant sources. This report, completed in August 1986, identified several possible sources of groundwater contamination, including the now abandoned San Bernardino Airport.



In November 1986, the Department of Toxic Substances Control (DTSC) issued a Determination of Imminent and Substantial Endangerment to the health and safety to the residents of San Bernardino, based upon the loss of municipal domestic water wells and the potential threat of contamination to additional downgradient wells.

In 1987, the County of San Bernardino Department of Health Services (CSBDHS) completed a study of small quantity hazardous waste users in San Bernardino, including TCE and PCE users, to quantify the amount of these contaminants used in the area. During 1988, the zone contractor for DTSC, Ecology and Environment, Inc. (E & E), completed a preliminary assessment of the site including the construction of nine monitoring wells at three separate locations throughout the suspected plume area. The results obtained from testing these wells confirmed the existence of a continuous plume of TCE and PCE groundwater contamination throughout the depth of the saturated alluvium.

GEOLOGY

The alluvium in the San Bernardino valley varies considerably in thickness, with maximum thickness occurring adjacent to the northeast side of the San Jacinto fault. Within the plume area, the alluvium increases in thickness from 400 feet at the Newmark well field near the base of the San Bernardino mountains to at least 1200 feet at the leading edge of the North San Bernardino/Newmark plume near the center of the San Bernardino valley. The northern portion of the plume area, just south of the San Bernardino mountains, consists predominately of sand, gravel and boulders with little or no clay. The presence of the numerous clay layers increases from north to south from where they appear just north of the Waterman Avenue well.

The groundwater at the Newmark area originates from the surface runoff in the San Bernardino mountains. Once the surface water has passed the base of the San Bernardino mountains, it flows into natural percolation areas located upgradient of the Newmark plume.

DESCRIPTION OF PLUME

The North San Bernardino/Newmark groundwater plume is approximately three

miles long, one mile in width, and the contaminants are generally uniform throughout the entire depth of the aquifer. The plume is migrating downgradient at a rate of one to five feet per day depending on rates of natural recharge, local pumping patterns, and the hydrologic condition of the basin.

ALTERNATIVE WELLHEAD TREATMENT PROCESSES

Based on the level of volatile organic contaminants (VOCs) in the groundwater, SBMWD considered conventional air stripping, granular activated carbon (GAC), and conventional air stripping with carbon off-gas treatment. Conventional air stripping with off-gas treatment, where land use permitted, was determined to be the most cost-effective alternative. The SBMWD's study included the construction of a large scale pilot air stripping tower to test various tower packing for VOC removal efficiencies and operating costs.

AIR MODELING - HEALTH RISK ASSESSMENT

The Newmark and Waterman health risk assessments combined the results of computer-generated air dispersion analysis and recent toxicological information to provide an estimate of the inhalation dose of an average individual residing adjacent to the proposed air stripping plants. The toxicological information was used to determine whether that dose was of any significant concern from both an acute or chronic exposure standpoint.

The modeling efforts predicted that ambient concentrations would be far below those which could cause any acute toxic effects. The predicted maximum concentrations without emission control would, however, have a small effect on background VOC levels in the vicinity of stripping columns. Since such low background levels would represent an additive smog producing agent, the decision was made to incorporate vapor phase carbon to comply with Air Quality Management District (AQMD) cross media transfer regulations.

COMMUNITY AWARENESS

In 1986, a community relations plan was implemented by the DTSC and SBMWD to provide ongoing information to the residents of San Bernardino to encourage public involvement in the decision-making process of the groundwater contamination.

tion remediation projects. This effort included a series of public meetings with local city officials, community meetings with residents, and periodic press releases to update the public as the wellhead treatment projects progressed.

Officials from the RWQCB, Santa Ana Region, DOHS-ODW, DTSC, AQMD, and the City were present at most meetings/press releases which served a dual purpose, i.e., provided the broad range of expertise needed to address public concerns, and enabled regulatory officials to buy into the project.

PERMITTING REQUIREMENTS

Upon completion of the health risk assessments, SBMWD obtained mitigated declarations of negative environmental impacts for the construction of three wellhead treatment plants. The DHS-ODW and the DTSC approved the design and operational procedures for two conventional air stripping and one single-pass GAC plant. The RWQCB, Santa Ana Region, authorized a NPDES permit to discharge plant start-up and testing fluids into local city storm drains. Based on the results of the health risk assessments and project compliance with California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (SCAQMD) issued permits to construct and operate the air stripping plants.

PROJECT FUNDING

The 1986 Determination of Imminent and Substantial Endangerment for the residents released state superfund money for interim remedial action in the Newmark-Waterman contamination area. The DTSC authorized the SBMWD to construct four air stripping towers, two of which became operational in 1988 at the Newmark well field and two which came on line in July 1989 at the Waterman site. The Newmark towers are designed to treat up to 8.6 mgd and the larger Waterman-towers treat 14.4 mgd. Tower air emissions will be treated with carbon adsorption units by the end of 1992. A DTSC-funded GAC wellhead treatment plant at 17th and Sierra Way was completed in 1990, and is treating 6.0 mgd of groundwater from the 16th Street and 17th Street wells which are located near the leading edge of the north San Bernardino/Newmark plume.

RANGE OF TCE AND PCE CONCENTRATIONS
IN THE NORTH SAN BERNARDINO/NEWMARK
AND MUSCOY/CAMP ONO AREA SBMWD WELLS
1980 through 1992
(ug/l)

WELL	TCE		PCE		MGD Capacity
	High	Low	High	Low	
Newmark #1	20.5	0.5	145.0	1.3	1.4
Newmark #2	19.5	0.1	38.9	0.1	2.0
Newmark #3	21.6	1.4	165.0	13.8	1.9
Newmark #4	36.8	0.1	187.0	0.1	2.8
Waterman	4.8	0.2	27.6	0.1	4.0
Leroy	10.2	0.1	57.3	0.5	4.2
30th	6.7	1.2	22.7	3.6	2.4
31st	6.5	0.1	25.2	0.6	4.1
27th	1.9	0.5	3.7	0.5	2.2
25th	3.2	0.5	6.2	0.5	2.7
23rd	3.9	N.D.	4.6	N.D.	2.0
19th #1	2.9	0.5	15.3	0.5	2.0
19th #2	8.0	0.1	8.1	N.D.	1.5
17th	4.5	0.1	4.5	0.1	2.5
16th	4.0	0.1	2.0	0.2	3.2
TOTAL					38.9

COST OF DTSC WELLHEAD TREATMENT PLANTS
IN THE NORTH SAN BERNARDINO/NEWMARK
AND MUSCOY/CAMP ONO AREA SBMWD WELLS

SITE	TYPE OF TREATMENT	CAPACITY	CAPITAL	O & M
		MGD	COST (\$ million)	Cost to Treat (\$/Acr-Ft)
Newmark	Air stripping with off-gas treatment	8.6	1.6	60.00
Waterman	Air stripping with off-gas treatment	14.4	2.8	60.00
19th	Single pass GAC	8.0	1.5	80.00
17th	Single pass GAC	6.0	0.955	80.00

Newmark and waterman 0.0184 ¢
gallon

17th Street 0.024 ¢ 7
gallon

In 1990, the DTSC approved funding for the construction of an 8 mgd GAC wellhead treatment plant at the SBMWD 19th Street pumping plant to remove TCE and PCE from three domestic water wells. The 19th Street pumping plant is located in west San Bernardino near the suspected leading edge of the Muscoy/Camp Ono plume.

USEPA SITE DESIGNATION

In March 1989, the Newmark well field was placed on the United States Environmental Protective Agency (USEPA's) National Priority List (NPL), thereby allowing federal superfund money to be spent on site remediation. The USEPA conducted a search to identify potentially responsible parties that contributed to the Newmark groundwater contamination problem. In 1990, the USEPA's Environmental Monitoring System Laboratory (EMSL) performed a review of aerial photography of the Newmark area for 1946 through 1989 to locate evidence of potential contamination sources. An intensive analysis of historical photographs of the Newmark plume area was performed. The imagery data analyzed was derived from aerial photographs collected over a 44-year period (1946-1989). The photographic analysis focused on discovery of any possible sources of solvent contamination that could affect the public water wells of San Bernardino.

The 1946 photographs of the Newmark plume area revealed a small active airfield with many aircraft but no visible waste disposal. The airfield appeared to still be active in the 1949 photographs. The only change noted by 1952 was the presence of residential development south of the airfield. The 1959 photographs revealed the presence of a large disposal trench near the main runway and a light colored, liquid-filled waste pit near the hangars of the airfield. The trench was covered by 1966 but the waste pit (later referred to as "Cat Pit") containing a dark liquid remained visible. The hangar area of the airfield had been fenced and a new road bisected the area. Little change was noted at the hangar area in 1968 but new development around the area was evident. By 1980 the "Cat Pit" had been covered over and new residential development was present throughout the area. The photos of 1986 reveal the old hangar area had been torn down and residential development had been built on the site.

Eyewitness accounts confirmed that the now-closed private San Bernardino Airport and the so-called "Cat Pit" were once locations of extensive solvent

disposal (URS 1986). The entire area has been described as a place where a wide variety of solvent use, liquid waste storage, leaking, and dumping had occurred.

After airport operations ceased about 1958, the site was used by five or so businesses, including trucking companies, a crane outfit, two metal fabricators, and a heavy machinery repair operation until about 1972. Central to the heavy machinery repair operation was an approximately 20-foot-wide by 14-foot-deep pit with ramps over it. The "Cat Pit" was used to drain oil and other fluids from heavy machinery that was driven onto the ramps. TCE was used to clean the equipment. Drums marked TCE were seen on the property, and fluids in the pit have been reported to have been six-feet deep at times. When the pit "became clogged" (1965 or 1966), the sludge was removed and hauled somewhere to the west and dumped.

The old runways were reportedly used for night-time dumping from as many as 15 tanker trucks at a time in order to avoid a fee and a longer trip to an approved disposal site. The trucks often belonged to cesspool or septic tank disposal companies. Septic tanks and equipment were often cleaned with TCE.

CONCLUSION

Based on the findings of the field research conducted by the DTSC, RWQCB, Santa Ana Region, the CSBDHS, the USEPA EMSL, and the cities of San Bernardino and Redlands, five (5) major areas of contamination were identified in the Bunker Hill basin groundwater and subsequently classified as follows: Norton Air Force Base, North San Bernardino/Newmark, Redlands/Crafton, Muscoy/Camp Ono and Santa Fe.

Local water officials have requested assistance, in the form of funds, from the USEPA and the DTSC to construct additional wellhead treatment on contaminated wells within the Muscoy/Camp Ono, North San Bernardino/Newmark, and Crafton/Redlands plumes. Riverside water officials fear that continued groundwater extraction near Norton may accelerate lateral movement of VOC contaminants in the two well-defined groundwater aquicludes located within the artesian pressure zone portion of the basin, thus jeopardizing a larger portion of their domestic water supply (50,000 acre-feet per year).

The success of the North San Bernardino/Newmark DTSC-funded groundwater contamination remediation project is due primarily to the exceptional level of cooperation extended between the federal, state, county, local agencies involved throughout the project. The SBMWD funded much of the preliminary engineering costs including the cost to conform with CEQA for each project. SBMWD, acting as the engineer/contractor, utilized its engineering and specialty construction staff to provide a large portion of the engineering and all labor and equipment required to construct the DTSC-funded wellhead treatment plants. In doing so, the SBMWD and DTSC were able to reclaim 29 mgd (37 mgd by September 1992) of contaminated groundwater for domestic water use.

In total, the DTSC has funded \$6.9 million for groundwater contamination remediation projects in San Bernardino. All operation and maintenance costs incurred at the DTSC-funded wellhead treatment projects are the responsibility of the SBMWD.

The USEPA's zone contractor for the Newmark project (URS) will complete Phase II of the Remedial Investigation Feasibility Study (RI/FS) in late 1992. Monitoring wells are currently being drilled near the suspected source to further identify the types and concentrations of volatile organic contaminants (VOCs) in the vadose zone as well as the groundwater upgradient from the Newmark well site. URS has drilled additional monitoring wells to delineate the vertical distribution of contaminants within the aquifer. The completed wells will be developed and sampled for halogenated VOCs, semi-volatile organics, pesticide/PCBs, TPH, and metals plus mercury using EPA CLP RAS and SAS methods.

Based upon the test results obtained from the monitoring wells and the plume groundwater modeling (completion of the RI/FS), the USEPA will determine what, if any, source control remediation actions and/or long-term mitigation measures are required.

A key factor in SBMWD's success in obtaining state and federal funds for the construction of groundwater contamination remediation projects is its ability to work effectively within the political/institutional (funding/permitting) process, and to complete projects on time and within budget.

REFERENCES

State of California Department of Toxic Substances Control - Ecology & Environment, Inc.

State of California Department of Health Services, Office of Drinking Water

County of San Bernardino Department of Health Services

Regional Water Quality Control Board, Santa Ana Region - URS Corp.

South Coast Air Quality Management District

United States Environmental Protection Agency, Region 9 - URS Corp. - Environmental Monitoring Systems Laboratory

United States Geological Survey, San Diego

John Carollo Engineers

McLaren/Hart Environmental Engineering

NBS Lowry Engineers and Planners

Tom Dodson & Associates

San Bernardino Municipal Water Department

Exhibit 59

FILE TERRACE

HARPER AND ASSOCIATES, INCORPORATED

CONSULTING ENGINEERS



OPERATIONS



JUN 14 1994

15400 RANCHITO DRIVE, LAKE MATHEWS (PERRIS) CA 92570 (909) 780-9058
CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPT.

INVOICE

June 10, 1994

Water Department
City of San Bernardino
P. O. Box 710
San Bernardino, CA 92402

Attention: Thomas A. Valdez

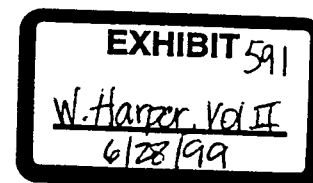
Reference: Purchase Order No. 946029

Furnished corrosion engineering consulting services for structural and seismic evaluation of the Terrace No. 2 and No. 3 Steel Water Storage Reservoirs

TOTAL AMOUNT DUE = \$7,756.00

OK

u



CITY 12-1101

United States Summary
Judgment Motion,
Ex 59, Page 656

HARPER AND ASSOCIATES, INCORPORATED

CORROSION ENGINEERING CONSULTANTS

15400 RANCHITO DRIVE, LAKE MATHEWS (PERRIS), CA 92570 • (909) 780-9055 • FAX (909) 780-2315

SOIL TEST REPORT

PROJECT: Evaluation of Site Soil for Heavy Metals
STRUCTURES: Terrace No. 2 and No. 3 Reservoirs
OWNER: City of San Bernardino
LOCATION: San Bernardino, California
REPORT BY: William B. Harper, P.E.
DATE: June 10, 1994

I. GENERAL INFORMATION

- A. This report is filed in response to a request by Mr. Michael H. Lowe of the City of San Bernardino Water Department to Mr. William B. Harper of Harper and Associates, Incorporated for testing of selected soil samples from the site of two tanks which are being evaluated for corrosion, seismic and structural reliability.
- B. Visual observations at the site revealed the presence of paint chips scattered over the site. Many of the chips were on the surface of the soil, but probing into the soil revealed presence of chips within the soil. The City indicated this was the result of a previous repainting of the reservoirs, which included abrasive blast cleaning of the exteriors of the reservoirs. This work was apparently accomplished without any containment or subsequent clean-up of the site at the conclusion of the blast cleaning project.
- C. The purpose of the testing is to determine the presence of lead, chromium compounds and zinc in the soil adjacent to the existing reservoirs. The sampling was accomplished at four locations, which would be representative of soil conditions within the site.
- D. Samples were gathered by Harper and Associates, Incorporated for lab analyses under Title 22 by AmeriChem Testing Laboratory of Orange, California. Tests and Report was prepared on basis of lead, chromium and zinc concentrations.
- E. Test results are included in this report to enable City to determine extent of heavy metal content of soil at the site.

and to use this information for future planning for the site.

- F. This report is prepared solely on the basis of noted tests and for the purpose stated above.

II. LABORATORY TEST RESULTS

A. Laboratory test results are as follows:

1. Location 1 - Fence, east of Reservoir No. 3
Lead level is 392.0 PPM. Chromium level is 14.0 PPM.
Zinc level is 770 PPM.
2. Location 2 - At north fence, between Reservoirs No. 2 & 3
Lead level is 3,156 PPM. Chromium level is 11.2 PPM.
Zinc level is 316 PPM.
3. Location 3 - 42" north of Reservoir No. 2
Lead level is 4,814 PPM. Chromium level is 8.0 PPM.
Zinc level is 19.3 PPM.
4. Location 4 - 20' south of Reservoir No. 2
Lead level is 1,276 PPM. Chromium level is 7.8 PPM. Zinc level is 57.6 PPM.

- B. Laboratory analyses was accomplished on the basis of testing for Total Threshold Limit Concentration (TTLIC), which relates to dry paint quantity in a specific film or soil. A project which exceeds 1,000 PPM requires the project be declared a hazardous waste project. Testing for waste disposal is accomplished under the Soluble Threshold Limit Concentration (STLC) or Waste Extraction Test (WET) methods, which relates to the amount of extractable substance in a waste.

- C. As anticipated, test results of soil at all four test locations verified the high quantities of lead in the soil. The lead-bearing samples would be hazardous waste if the soil had to be removed, and would require removal to a Class I dumpsite, with all attendant permits, etc. Additionally, zinc level at Location 1 could possibly require that area be handled as hazardous waste.

- D. Current local regulations do not specifically designate the level at which static soil is considered hazardous and must be removed. Some guidance is given in one of the few available references regarding lead in soils, that from the EPA Office of Solid Waste and Emergency Response (OSWER), which relates to Superfund sites and establishes clean-up levels of 500 PPM to 1,000 PPM when the predicted use of the land is residential.

III. RECOMMENDATIONS

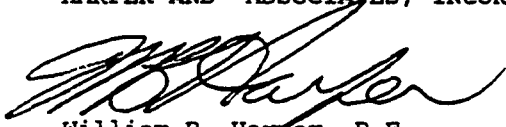
- A. Based on the above test results and noted information, it would appear that levels of lead within the soil, despite no known

definitive action level for removal, may require remediation of the site to remove the excessive levels of lead from the soil.

- B. As noted by the reference to OSWER and Superfund, the levels exceed those which have required remediation on certain sites "when the predicted land use is residential." The actual land use here will continue to be for a reservoir site, so the residential proviso does not apply.
- C. Despite the above, the danger of not remediating the soil from lead contamination is that City personnel may contract lead poisoning from working on the site, or worse yet, children or trespassers could be contaminated. Any of these would very likely result in legal actions by the affected parties.
- D. The final recommendation would be to retest the soil under the WET method and then make the final determination regarding remediation. REMEMBER - THE LEVEL FOR CLASS I LEAD HAZARDOUS WASTE IS 5 PPM, WHICH EQUATES TO 5/10,000 OF ONE PERCENT!!!!

Respectfully submitted,

HARPER AND ASSOCIATES, INCORPORATED



William B. Harper, P.E.
Registered Corrosion Engineer
Certificate No. CR 786

WBH/if



AmeriChem
Testing
Laboratory

1761 N. Balavia
Orange, CA 92665

(714) 921-1550
FAX (714) 921-4770

Analytical Report

REPORT NUMBER: SC-2806

CLIENT:

Harper and Associates, Inc.
15400 Ranchito Ave.
Lake Mathews(Perris), CA 92570
Attn.: Mr. Bill Harper

REPORT ON:

Solid Samples

DATE REPORTED: 03-31-94

DATE RECEIVED: 03-30-94

Analysis of soil samples:

Lead Analysis - EPA 7420, Detection Limit = 5 mg/kg

Chromium Analysis - EPA 7190, Detection Limit = 5 mg/kg

Zinc Analysis - EPA 7950, Detection Limit = 5 mg/kg

SAMPLE ID.	<u>LV. FOUND, TTLC mg/kg</u>		
	LEAD	CHROMIUM	ZINC
Terrace Site:			
1. Fence, East of #3	392	14.0	770
2. Between #2 and #3 At North Fence	3,156	11.2	316
3. @ 42" , North of Tank #2	4,814	8.0	19.3
4. @ 20 FT, South of #2	1,276	7.8	57.6

ND= Not detected

Respectfully submitted,

Peter T. Wu
Lab Director

CITY 12-1105

United States Summary
Judgment Motion,
Ex 59, Page 660



TWINING & ASSOCIATES, INC.

CORROSION ENGINEERING & INSPECTION SERVICES

747 W. Katella Avenue, Suite 105
Orange, California 92667
(714) 771-0855 • FAX (714) 771-0857

FILE
TERRACE II

March 5, 1993

Michael Lowe
City of San Bernardino
Municipal Water Dept.
300 North "D" Street
San Bernardino, CA 92401

3/28/94

NOTIFIED
KING & JONES
SPOKE WITH HARPER
CAN BE INTOMBED
WITH TAKE MORE
REP SAMPLE AND
SLAG SITE
M

Dear Mike:

The soil sample obtained from the Terrace II reservoir site which exhibited what appeared to be red-lead paint chips was submitted to AmeriChem Testing Laboratory for analysis as requested.

Two specific lab tests were performed to identify lead content. Results were as follows:

1. Total Threshold Limit Concentration = 4,350 PPM
2. Soluble Threshold Limit Concentration = 326 PPM

The two test methods apply to two separate responsibilities. First, the TTLC illustrates that even having been diluted by the mixed-in soil, the lead content in the dry paint chips exceed the action level of 1,000 PPM established by Title 22 which governs the removal and handling of a hazardous material.

Second, the STLC which governs the disposal of a hazardous waste. The action level established by Title 22 requires that waste material containing in excess of 5 PPM be disposed of in a Class 1 site.

Given the above test results it is recommended that the City take the appropriate action to remove the lead-bearing soil from the site and dispose of it as required by Title 22. Perhaps the best approach would be to retain a Hazardous Waste Abatement contractor to remediate the site.

Sincerely,

James Isom
Vice President

CITY 12-1106

United States Summary
Judgment Motion,
Ex 59, Page 661



**AmeriChem
Testing
Laboratory**

1761 N Balavia
Orange, CA 92665

(714) 921-1550
FAX (714) 921-4770

Analytical Report

REPORT NUMBER: SC-1659

CLIENT:

Twining & Associates, Inc.
747 W. Katella Ave., Suite 105
Orange, CA 92667
Attn.: Mr. James Isom

REPORT ON:

Solid Sample

DATE REPORTED: 03-04-93

DATE RECEIVED: 03-04-93

Analysis of Solid Sample:

Lead Analysis - EPA 7420, Detection Limit = 0.10 mg/l, STLC
Detection Limit = 5 mg/kg, TTLC

Sample Id. : City of San Bernadino Terrace 2 Reservoir Site-Soil sample

ANALYSIS

LV. FOUND

Lead, STLC

326 mg/l

Lead, TTLC

4,350 mg/kg

STLC extraction procedures: Title 22 Cal Wet 66700, 48 hours
TTLC digestion procedures: EPA 3050

Peter T. Wu
Lab Director

CITY 12-1107

United States Summary
Judgment Motion,
Ex. 59, Page 662

HARPER AND ASSOCIATES, INCORPORATED

CORROSION ENGINEERING CONSULTANTS

15400 RANCHITO DRIVE, LAKE MATHEWS (PERRIS), CA 92570 • (909) 780-9055 • FAX (909) 780-2315

MEMORANDUM

DATE: June 10, 1994
TO: Mike Lowe, City of San Bernardino Water Department
FROM: Bill Harper
SUBJECT: Report of Soil Tests at Terrace Site

Enclosed is the report covering the results of the four soil tests taken at the Terrace Reservoir site. Sorry for the delay - the lab report was misfiled in another project folder and was just recovered.

The report is self-explanatory, so I'll not reiterate the contents.

This was not covered in the Purchase Order for the project. The cost of lab tests and report are as follows:

Four laboratory tests under Title 22 @ \$75.00 each = \$300.00

Coordination and report by Corrosion Engineer

1.25 Hours @ \$95.00 = 118.75

TOTAL AMOUNT DUE \$418.75

Give me a call a call at (909) 780-9055 or via FAX at (909) 780-2315 if you have any questions or if clarifications are needed.

CITY 12-1108

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

P. O. BOX 710 • SAN BERNARDINO, CA 92402

PURCHASE REQUISITION

COMPLETE THE FOLLOWING:

DATE 6/14 19 94 WANTED BY 6/14 19 94
 CONSTRUCTION ORDER NO. 5109 WORK ORDER NO. _____
 EQUIP. OR TRUCK NO. _____ MAKE _____
 MATERIAL USED FOR: _____

NEW MATERIAL IS FOR: REPLACEMENT ☐ REPAIR ☐ NEW ☐
 OLD MATERIAL WILL BE: JUNKED ☐ SALVAGE ☐ SERIAL NO. _____
 OTHER _____ PROPERTY TAG NO: _____

COMPANY CONTACTED _____

PERSON CONTACTED _____ PHONE () _____
 DELIVERY DATE _____ TERMS _____ FREIGHT _____
 ORDER DATE _____ LIST ACCOUNT NO. BY LINE _____

LINE NO.	QUANTITY	DESCRIPTION	UNIT PRICE	EXTENSION
1	4	LAB TEST UNDER TITLE 22 (2)	\$75.	300.00
2		COORDINATION AND REPORT BY		
3		CORROSION ENGINEER 1.25 hr	\$95.00	118.75
4				
5				418.75
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

CITY 12-1109

United States Summary
 Judgment Motion,
 Ex. 59, Page 664

REQUISITION NO. 29072 OFFICE USE ONLY

APPROVED SUPV. [Signature] REQUESTED BY _____
 P. O. NO. _____ VENDOR HARPER AND ASSOC. INC

Exhibit 60

1 Thomas N. Jacobson, State Bar # 55127
2 **GRESHAM, SAVAGE, NOLAN & TILDEN, LLP**
3 600 N. Arrowhead Ave., Suite 300
4 San Bernardino, CA 92401
5 Telephone No. (909) 884-2171
6 Facsimile No. (909) 888-2120

7 Russell V. Randle
8 Paul A.J. Wilson
9 **PATTON, BOGGS, L.L.P.**
10 2550 M Street, N.W.
11 Washington, D.C. 20037
12 (202) 457-6000

13 Attorneys for CITY OF SAN BERNARDINO,
14 MUNICIPAL WATER DEPARTMENT

15 UNITED STATES DISTRICT COURT
16 CENTRAL DISTRICT OF CALIFORNIA

17 STATE OF CALIFORNIA, on behalf of the
18 California Department of Toxic Substances
19 Control,

20 Plaintiff,

21 vs.

22 UNITED STATES OF AMERICA,
23 DEPARTMENT OF THE ARMY

24 Defendants.

25 THE CITY OF SAN BERNARDINO
26 MUNICIPAL WATER DEPARTMENT,

27 Plaintiff,

28 vs.

UNITED STATES OF AMERICA,
DEPARTMENT OF THE ARMY,

Defendant.

///

///

///

CASE NO. CV 96-5205 MRP (JGx)

CASE NO. CV 96-8867 MRP (JGx)
(Consolidated cases)

DECLARATION OF JOSEPH F.
STEJSKAL

Lawyers
GRESHAM, SAVAGE,
NOLAN & TILDEN, LLP
600 No. Arrowhead Ave.
Suite 300
San Bernardino, CA 92401
(909) 884-2171

N:\5657-000\p\Decla of Joseph F. Stejskal

United States Summary
Judgment Motion,
Ex 60, Page 665

1 DEFENDANTS' EXHIBIT 55 FOR ID
BRYAN LUI, CSR NO. 11223
DATE: 6-10-99
WITNESS: STEJSKAL, V. II

551

1 I, JOSEPH F. STEJSKAL declare as follows:

2 1. I am the Director of Engineering-Operations-Distribution for the City of San
3 Bernardino Municipal Water Department. If called upon to testify I would testify as set forth herein
4 below. All of the items set forth herein below are within my personal knowledge and experience.

5 2. As part of my responsibilities, I am involved in monitoring the water quality of the
6 City's water supply, supervising all construction projects and supervising the operation and
7 distribution of the water supply.

8 3. In 1980, while working for the City of San Bernardino Municipal Water Department,
9 I became aware of certain contaminants found in the City's drinking water supply. Throughout the
10 early 1980's and early 1990's I worked with the Environmental Protection Agency and its Project
11 Manager on various issues, including the development of a program to remove the contaminants
12 from the water supply. My job responsibilities include being familiar with the contamination, its
13 contents and the possible methods for removing the contaminants from the water supply.

14 4. The area of contamination has been traditionally referred as the Newmark Superfund
15 Site and includes two plumes known as the Muscoy plume and the Newmark plume. From the
16 information developed by the Environmental Protection Agency, both plumes appear to originate
17 at the site of a former Army camp known as Camp Ono.

18 5. The contaminants contained in the plume include trichloroethylene (TCE),
19 perchloroethylene (PCE), Freon-11 and -12, chloroform and carbon tetrachloride.

20 6. The City of San Bernardino Municipal Water Department has spent approximately
21 Five Million Dollars for capital costs, sampling costs and related costs which we are advised are not
22 being reimbursed by the Environmental Protection Agency under our contract with them.

23 I declare under penalty of perjury under the laws of the State of California that the foregoing
24 is true and correct.

25 Executed this 25 day of February, 1999 at San Bernardino, California.

26
27
28 
JOSEPH F. STEJSKAL

Lawyers
GRESHAM, SAVAGE,
NOLAN & TILDEN, LLP
680 No. Arrowhead Ave
Suite 300
San Bernardino, CA 92401
(909) 843-2171

N:\5637-000\pjd\Declaration of Joseph F. Stejskal

Exhibit 61

K04752
10/22/99

1 Thomas N. Jacobson, State Bar #55127
2 GRESHAM, SAVAGE, NOLAN & TILDEN, LLP
3 600 N. Arrowhead, Suite 300
4 San Bernardino, CA 92401-1148
5 Telephone No.: (909) 884-2171
6 Facsimile No.: (909) 888-2120

7 Russell V. Randle
8 Mary Beth Bosco
9 Paul A. J. Wilson
10 PATTON, BOGGS, L.L.P.
11 2550 M Street, N.W.
12 Washington, D.C. 20037
13 Telephone No.: (202) 457-6000

14 Attorneys for CITY OF SAN BERNARDINO
15 MUNICIPAL WATER DEPARTMENT

16 UNITED STATES DISTRICT COURT
17 CENTRAL DISTRICT OF CALIFORNIA

18 STATE OF CALIFORNIA, on behalf of the
19 California Department of Toxic Substances
20 Control,

21 Plaintiff,

22 vs.

23 UNITED STATES OF AMERICA,
24 DEPARTMENT OF THE ARMY,

25 Defendants.

26 THE CITY OF SAN BERNARDINO
27 MUNICIPAL WATER DEPARTMENT,

28 Plaintiff,

29 vs.

30 UNITED STATES OF AMERICA,
31 DEPARTMENT OF THE ARMY

32 Defendant.

33 ///

34 ///

35 ///

36 ///

) CASE NO. CV 96-5205 MRP (JGx)
) CASE NO. CV 96-8867 MRP (JGx)
) (Consolidated cases)

) PLAINTIFF'S, CITY OF SAN
) BERNARDINO MUNICIPAL WATER
) DEPARTMENT, RESPONSES TO
) DEFENDANT'S INTERROGATORIES

) SET THREE [3]

) Judge: Mariana R. Pfaelzer

503
EXHIBIT
FOR IDENTIFICATION
THEODORA M. KELLY, C
6-2 1999
WITNESS *Lowe*
United States Summary
Judgment Motion,
Ex. 61, Page 667

98-11-6-69
98-11-3-270
RESPONSES TO DEFENDANT'S
THIRD SET OF INTERROGATORIES

1
ORIGINAL

1 PROPOUNDING PARTY: UNITED STATES OF AMERICA,
2 DEPARTMENT OF THE ARMY
3 RESPONDING PARTY: THE CITY OF SAN BERNARDINO MUNICIPAL
4 WATER DEPARTMENT
5 SET NUMBER: THREE
6

7 Plaintiff, THE CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
8 (the City), responds to Defendant's Interrogatories, pursuant to the provisions of *Federal Rules of*
9 *Civil Procedure*, Rule 33, as follows:

10 . Despite the fact this responding party has filed a Motion for Summary Judgment that may
11 be dispositive of the liability phase of this action, it should be noted that this responding party
12 has not fully completed its investigation of all facts and possible theories of recovery relating to
13 this case, and has not fully completed discovery in this action if the case is not disposed of by the
14 Motion for Summary Judgment and has not completed its preparation for the trial, should a trial
15 be required. All of the answers contained herein are based upon such information and
16 documents which are presently available to and specifically known to this responding party and
17 disclose only those contentions which presently occur to such responding party. It is anticipated
18 that further discovery, independent investigation, legal research and analysis will supply
19 additional facts, add meaning to the known facts, as well as establish entirely new factual
20 conclusions and legal contentions, all of which may lead to substantial additions to, changes in,
21 and variations from the contentions herein set forth. The following interrogatory responses are
22 given without prejudice to responding party's right to produce evidence of any subsequently
23 discovered fact or facts which this responding party may later recall. Responding party
24 accordingly reserves the right to change any and all answers herein as additional facts are
25 ascertained, analysis are made, legal research is completed and contentions are made. The
26 answers contained herein are made in a good faith effort to supply as much factual information
27 and as much specification of legal contentions as is presently known but should in no way be to
28 the prejudice of the Defendant in relation to further discovery, research or analysis.

1 **INTERROGATORY NO. 9:**

2 Identify and describe, in detail, any water reservoir (which for purposes of this
3 interrogatory shall include tanks, basins, cross-connections, treatment plants, or any other facility
4 used to treat, store, or transport water) owned, operated, acquired, or maintained by the City of
5 San Bernardino during any time from 1930 to the present. Your description should include, but
6 is not limited to: the size and geographic location of the reservoir, the materials of which the
7 reservoir was constructed; the date the reservoir was first constructed (and when it was
8 demolished, if applicable); the date the reservoir was first used by the City, the materials used to
9 coat the interior and exterior of the reservoir (including any materials used to thin the coating);
10 the source of water entering the reservoir; the method(s) used to import water into the reservoir
11 and the way(s) the water is (or has been) removed from the reservoir; maintenance of the
12 reservoir (including frequency of and procedures for reapplying interior and exterior coatings,
13 and for flushing and cleaning the interior); use of organic solvents or any other materials
14 containing hazardous substances at, on, or in the reservoir; any vapor, soil, or water sampling
15 and testing conducted at the reservoir; and the names and current addresses of all persons who
16 have knowledge of or who performed maintenance work at the reservoirs (including a
17 description the specific work each person was doing at the reservoir).

18 **RESPONSE TO INTERROGATORY NO. 9:**

19 Objection, vague, overly broad and not intended to lead to discoverable and relevant
20 information. Notwithstanding said objection, enclosed with these interrogatories and
21 incorporated by this reference is a list of reservoirs owned by the City of San Bernardino
22 between 1930 and the present. The reservoirs within and upgradient from the plume, including
23 their construction materials have been previously provided, however, the attached chart describes
24 the construction and other characteristics requested in this interrogatory. The source of the water
25 entering the reservoirs is well water, which in some cases is transmitted by booster pumps. The
26 maintenance of the reservoirs is set forth in the attachment. The persons having knowledge of
27 the reservoirs and their cleaning are – Current Employees: Bernard Kersey, Joseph Stejskal,
28 Cliff Bellinghausen, Patrick Clifford, Frank Delgado, Todd Frye, Mike Garland, James Hill,

1 Richard Johnson, Berlinda McCadney, Lester Perkins, David Reynolds, Steve Shipley, Ernest
2 Bogle, Curt Burns, Robert Chilcote, Jon Fiveland, Johnny Garcia, Mike Henry, Brad
3 Higinbotham, Mark Martinez, Randy Newman, Mario Rios, Terry Tonn, Richard Villa, Don
4 York, Mike Lowe, all whose address is 330 No. "D" Street, San Bernardino, California. Past
5 Employees, whose addresses are unknown are: Vernon Burdick, Dave Arciniega, Mike
6 Edgington, Ben Lopez, Ernie Best, Doris Humphreys, Albert Garcia, Roger Taylor, Diane
7 Lowell, Fred Ehemann, Charles Miller, Mark Stilt, Gene Sullivan, Linda Parrish, Nick Perez,
8 Darrye Brooks, Ed Navarro, Roger Chacon, John Ahearn, Pat Fletcher, Eric Williams, Raul
9 Serrato, Rock Rojas, Ralph Wilkinson, Leonard Viveros, Dave Beckner, Phil Tamayo, Mike
10 Craig, Mike Lewis, Tim Wainright, David Quiroz, Bruce Leach, Phil Murphy, Gene Thealand,
11 William Shroeder, Ernest Pruden, Dave Leffler, Mike Deleon, Dennis O'Connell, Mike Palacios,
12 Gilbert Fausto, Allen Byrd, Carlos Herrera, Rudy Florez, Adrian Ramirez.

13 **INTERROGATORY NO. 10:**

14 Identify and describe, in detail, any water distribution lines owned, operated, or
15 maintained by the City of San Bernardino during any time from 1930 to the present. Your
16 description should include, but is not limited to: the manufacturer of the water line, who
17 installed the water line, the type of water line, the size of the pipe used in the water line, the
18 materials of which the water pipe was constructed (including any coating or lining materials), the
19 geographic location of the line, the depth of the water line below the surface, the average flow
20 rates of the line, the average volume of flow in the line, the location of any lateral or main
21 connections, any known damage to the line, any known leaks, breaches or breaks in the line,
22 maintenance or repairs performed on the line, any calculations or estimates of known or average
23 leakage volumes, and the identification of all documents relating to this interrogatory including
24 any vapor, soil or water sampling and testing done at the water lines.

25 **RESPONSE TO INTERROGATORY NO. 10:**

26 Objection, vague, ambiguous, overly broad and not intended to obtain discoverable or
27 relevant evidence. It is impossible to describe in a narrative form the distribution lines, however,
28 Plaintiff will make available for inspection and copying, at Defendant's expense, maps and

1 charts showing the distribution lines affecting the area of the plume or upgradient from the
2 plume. Information concerning the manufacture of the pipe is not available. The depth of the
3 water line is not readily ascertainable without digging up streets. All known damage to the lines
4 are contained in volumes of records maintained by the Municipal Water Department and upon
5 prior arrangement available to defendant for inspection and copying.

6 **INTERROGATORY NO. 11**

7 Identify all documents relating to, and describe in detail, each instance where the City has
8 received complaints about the water distributed in the City's system (e.g. including, but not
9 limited to, complaints about the taste, smell, or odor); breaks or damage to the water lines,
10 reservoirs, or other components of the distribution system; or otherwise learned of any
11 contamination of the water within its system (including a description of all unknown or
12 suspected sources of the contamination).

13 **RESPONSE TO INTERROGATORY NO. 11:**

14 Objection, vague, ambiguous and overly broad. Said interrogatory is not intended to
15 disclose discoverable or relevant evidence. Notwithstanding said objection, the complaints
16 relating to the City's water systems are maintained in volume of records and defendant may,
17 upon prior arrangement, inspect and copy said records.

18 **INTERROGATORY NO. 12:**

19 For any hazardous substance, product that contains a hazardous substance, or product that
20 degrades into a hazardous substance (specifically including but not limited to TCE, PCE, Freon
21 11 or 12, products containing TCE, PCE, Freon 11 or 12, or products that degrade into TCE,
22 PCE, Freon 11 or 12) which was purchased, possessed, used, or generated by the City or its
23 contractors, identify all such substances and products, the locations where any such hazardous
24 substance or product was used (for its intended purpose or otherwise), treated, stored, disposed
25 of, or sent for recycling, treatment, storage, disposal, or processing, and the names and current
26 addresses of employees or other persons with knowledge of such activity.

27 ///

28 ///

1 RESPONSE TO INTERROGATORY NO. 12:

2 Objection. Asked and answered. Vague, ambiguous and overly broad. Substances other
3 that TCE, PCE, Freon 11, Freon 12, chloroform and carbontetrachloride and their precursors, are
4 not in issue in this litigation. Notwithstanding said objection. See Response to Interrogatory
5 Number 4.

6
7 DATED: April 28, 1999

GRESHAM, SAVAGE, NOLAN & TILDEN, LLP

8
9 By: 

10 Thomas N. Jacobson
11 Attorneys for Plaintiff,
The CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT

12 DATED: April 28, 1999

PATTON BOGGS, L.L.P.

13
14 By: 

15 Russell V. Randle
16 Attorneys for Plaintiff,
The CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT

VERIFICATION

STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO

I have read the foregoing **PLAINTIFF'S, CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT, RESPONSES TO DEFENDANT'S INTERROGATORIES, SET THREE [3]** and know its contents.

☒ CHECK APPLICABLE PARAGRAPH

☐ I am a party to this action. The matters stated in the foregoing document are true of my own knowledge except as to those matters which are stated on information and belief, and as to those matters I believe them to be true.

☒ I am ☐ an officer ☐ a partner ☒ the **Deputy General MANAGER of The City of San Bernardino Municipal Water Department**, a party to this action, and am authorized to make this verification for and on its behalf, and I make this verification for that reason. ☐ I am informed and believe and on that ground allege that the matters stated in the foregoing document are true. ☐ The matters stated in the foregoing document are true of my own knowledge except as to those matters which are stated on information and belief, and as to those matters I believe them to be true.

☐ I am one of the attorneys for _____, a party to this action. Such party is absent from the county of aforesaid where such attorneys have their offices, and I make this verification for and on behalf of that party for that reason. I am informed and believe and on that ground allege that the matters stated in the foregoing document are true.

Executed on April 28, 1999, at San Bernardino, California.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Stacey Aldstadt
Stacey Aldstadt

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

PROOF OF SERVICE

STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO

RE: CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
vs UNITED STATES OF AMERICA, et al.

Case No. CV 96-8867 MRP (VAPx) and CV 96-8867 MRP (JGx)

I am employed in the County of San Bernardino, State of California. I am over the age of 18 years and not a party to the within action; my business address is: 600 N. Arrowhead Avenue, Suite 300, San Bernardino, CA 92401.

On April 28, 1999, I served a true copy of the within document described as **PLAINTIFF'S, CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT, RESPONSES TO DEFENDANT'S INTERROGATORIES, SET THREE [3]** on the interested parties in this action as follows:

SEE ATTACHED SERVICE LIST

(X) **BY MAIL** - I am "readily familiar" with the firm's practice of collection and processing correspondence for mailing. Under that practice, it would be deposited with the United States Postal Service with postage thereon fully prepaid at San Bernardino, California, on the same day in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

() **BY PERSONAL SERVICE** - I caused such envelope to be delivered by hand to the offices of the addressee pursuant to C.C.P. §1011.

() **BY EXPRESS MAIL/OVERNIGHT DELIVERY** - I caused such envelope to be delivered by hand to the office of the addressee via overnight delivery pursuant to C.C.P. §1013(c), with delivery fees fully prepaid or provided for.

() **BY FACSIMILE** - I caused such document to be delivered to the office of the addressee via facsimile machine pursuant to C.C.P. §1013(e). Said document was transmitted to the facsimile number of office of the addressee See Attached List from the office of Gresham, Savage, Nolan & Tilden, LLP in San Bernardino, California, on the date set forth above. The facsimile machine I used complied with California *Rules of Court*, Rule 2003(3) and no error was reported by the machine. Pursuant to California *Rules of Court*, Rule 2009(i), I caused the machine to print a transmission record of the transmission, a copy of which is attached to this declaration.

(X) **FEDERAL** - I am employed in the office of a member of the bar of this court at whose direction the service was made.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 28, 1999, at San Bernardino, California.


Ann LeMaster

SERVICE LIST

RE: *CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT*
vs UNITED STATES OF AMERICA, et al.
Case No. CV 96-8867 MRP (VAPx) and CV 96-8867 MRP (JGx)

Lisa Russell, Esq.
United States Department of Justice
Environment & Natural Resources Section
P.O. Box 23986
Washington, D.C. 20026-3986

FACSIMILE NO.: 202/514-8865
Telephone No.: (202) 514-1806

Martin F. McDermott
Environmental Defense Section
U.S. Department of Justice
601 D Street N.W., Room 8114.
Washington, DC 20004

FACSIMILE NO.: 202/616-2426
Telephone No.: 202/514-4122

J. Steven Rogers
Environmental Defense Section
U.S. Department of Justice
601 D Street N.W., Suite 8000
Washington, DC 20004

FACSIMILE NO.: 202/514-8865
Telephone No.: 202/514-2219

Ann Rushton, Esq.
Deputy Attorney General
State of California
Department of Justice
Office of the Attorney General
300 South Spring Street, Suite 500
Los Angeles, CA 90013

FACSIMILE NO.: 213/897-2802
Telephone No.: (213) 897-2608

Thomas H. Pacheco, Esq.
Environment and Natural Resources Division
Environmental Defense Section
301 Howard Street, Suite 870
San Francisco, CA 94105

FACSIMILE NO.: 415/744-6476
Telephone No.: 415/744-6480

Mark Rigau
Environmental and Natural Resources Division
Environmental Defense Section
301 Howard Street, Suite 870
San Francisco, CA 94105

FACSIMILE NO.: 415/744-6476
Telephone No.: 415/744-6491

Mark Chalfant
Mail Code ORC - 3
Office of the Regional Counsel
U.S. Environmental Protection Agency
75 Hawthorne Street, Region IX
San Francisco, CA 94105-3901

FACSIMILE NO.: 415/744-1041
Telephone No.: 415/744-1351

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
CONSTRUCTION ORDER LEDGER INDEX
TYPES OF COATINGS USED

DATE	C.O. #	LOCATION	JOB DESCRIPTION	COATING TYPE	LEAD PERSON
12/10/75	2388	Wiggins Hill Tank - W.U.	Painting	Aykid enamel	Lowe
6/30/76	2459	Sycamore #2	Exterior Painting	Aykid enamel	Lowe
6/30/76	2460	College Tank	Exterior Painting	Aykid enamel	Lowe
8/27/76	2473	Sycamore No. 1	Paint Exterior	Aykid enamel	Lowe
10/20/76	2487	Mountain Reservoir	Paint Exterior	Aykid enamel	Lowe
10/07/82	3138	Sycamore No. 1 Steel Res.	Sandblast exterior and coat the interior of water tank.	Super Tank	Lowe
02/18/82	3082	Mountain Reservoir No. 3	Sandblast and Recoat interior	Super Tank	Lowe
12/01/84	3249	Mountain Tank	Re Check coating		
03/27/84	3283	Mountain Tank (Steel Res.)	Recoat interior of Mountain Res.	Epoxy	Craig
06/05/85	3509	2100' Elv - Devore Tank	Re-Painting/Int. & Ext.	Super Tank & Aykid	Contractor
07/15/85	3544	College Tank - 1720' El.	Sandblast & Paint Exterior	Aykid enamel	Lowe
08/22/85	3560	Sycamore No. 2 Reservoir	Sandblast & Repaint Reservoir	Super Tank	Craig
12/12/86	3834	College, 3 MG Reservoir	Recoat Interior of Tank	Epoxy	Craig
10/11/88	4208	Palm Reservoir #1 & #2	Clean & Paint Exteriors of 192' & 48' Dia. Reservoirs	Aykid enamel	Craig
01/30/89	4424	Ridgeline Reservoir/Shandin Hills	Construction of a 100,000 Gallon Steel Reservoir	Aykid enamel & Epoxy	Contractor
10/30/90	4687	Sycamore No. 3 Reservoir Site	4.5 MG Metal Tank Construction		Contractor
05/14/92	4915	Sycamore No. 1 Reservoir	Paint Exterior & Rust Proof	Aykid enamel	Delgado
09/16/94	5164	Mountain Reservoir No. 1	Recoat Steel Tank	Aykid enamel	Newman
09/12/95	5264	Sycamore Reservoir No. 1	Recoat Steel Tank	Aykid enamel	Newman
09/23/96	5364	Sycamore Reservoir	Recoat Interior & Seismic retrofit of Steel tank	Epoxy	Contractor
09/23/96	5365	Palm Avenue Reservoir No. 1	Recoat Interior & Seismic retrofit of Steel tank	Epoxy	Contractor

INSPECTION / CLEANING OF RESERVOIRS
1 M.G. & ABOVE - EVERY 5 YEARS
1 M.G. & BELOW - EVERY 2 YEARS

RESERVOIR	CAPACITY	1990	1991	1992	1993	1994	1995	1996
ANTIL	258,000			May-92			Feb-95	
DALEY CYN	1.5		XX		Oct-93			
GILBERT	108,000			Jun-92		Mar-94		Feb-96
LYTLE CRK 1	3.5				Mar-93			
LYTLE CRK 2	7.5					Apr-94		
MILL & D	437,200				Apr-93		Mar-95	
7TH ST.	101,000		XX	May-92	Jan-93		Feb-95	
17TH ST.	108,500		XX			Jan-94		
WATERMAN	10.0						Mar-95	
PERRIS HILL	407,000		XX	May-92	Apr-93			
PERRIS HILL DAM	10.0		XX	Apr-92				Apr-96
ELECTRIC DR	8.0		XX					XX
LYNWOOD	223,000		XX	May-92	Apr-93		Apr-95	
MALLORY	169,000							
MEYERS CYN	2.5		Sep-91					XX
NEWMARK 2	7.5	Feb-92					XX	
NEWMARK 3	5.5	Feb-92					XX	
NEWMARK 4	8.9	Feb-92					XX	
19TH ST	258,000				Jul-93			
NORTH E	122,000		XX					
27TH ST	247,400		XX					
RIDGEVIEW	330,000							
SYCAMORE 1	2.5					Apr-94		XX
SYCAMORE 2	448,000					Jan-94		
SYCAMORE 3	4.5		XX		Mar-93			
DEL ROSA 1	460,000							
DEL ROSA 2	190,000					Feb-94		
DEL ROSA 3	3.0					Mar-94		
MOUNTAIN 1	2.0					Mar-94		
MOUNTAIN 2	223,000					Jan-94		
SHANDIN HILLS	219,000				Jul-93			
RIDGELINE	0.12		Nov-91					
TERRACE 2	1.1				Mar-93			
TERRACE 3	1.2					Mar-94		
COLLEGE	2.5					Mar-94		
DEVIL CYN	220,000							
DC DOM	10,000							
CAJON	5.0					Feb-94		
DEVORE	2.0					Feb-94		
TERRACE ELVD	100,000	XX		Apr-92				
PALM AVE 1	325,000	XX				Jan-94		
PALM AVE 2	5.0					Feb-94		

XX - Recommended

Date Completed

INSPECTION / CLEANING OF RESERVOIRS
1 M.G. & ABOVE - EVERY 5 YEARS
1 M.G. & BELOW - EVERY 2 YEARS

RESERVOIR	CAPACITY	1997	1998	1999	2000	2001	2002	2003
ANTIL	258,000							
DALEY CYN	1.5		XX					
GILBERT	108,000	May-97						
LYTLE CRK 1	3.5		XX					
LYTLE CRK 2	7.5	XX						
MILL & D	437,200		Feb-98					
7TH ST.	101,000	Feb-97						
17TH ST.	108,500							
WATERMAN	10.0		Jan-98					
PERRIS HILL	407,000							
PERRIS HILL DAM	10.0							
ELECTRIC DR	8.0		Dec-98					
LYNWOOD	223,000	Apr-97						
MALLORY	169,000			Mar-99				
MEYERS CYN	2.5							
NEWMARK 2	7.5		Mar-98					
NEWMARK 3	5.5		Mar-98					
NEWMARK 4	8.9		Mar-98					
19TH ST	258,000							
NORTH E	122,000							
27TH ST	247,400	Mar-97						
RIDGEVIEW	330,000							
SYCAMORE 1	2.5							
SYCAMORE 2	448,000	May-97						
SYCAMORE 3	4.5		XX					
DEL ROSA 1	460,000							
DEL ROSA 2	190,000							
DEL ROSA 3	3.0	XX						
MOUNTAIN 1	2.0	XX						
MOUNTAIN 2	223,000	Jun-97						
SHANDIN HILLS	219,000							
RIDGELINE	0.12			Feb-99				
TERRACE 2	1.1	XX						
TERRACE 3	1.2		XX					
COLLEGE	2.5			XX				
DEVIL CYN	220,000							
DC DOM	10,000		Sep-98					
CAJON	5.0			XX				
DEVORE	2.0			XX				
TERRACE ELVD	100,000							
PALM AVE 1	325,000	May-97						
PALM AVE 2	5.0			XX				

XX - Recommended

Date Completed

INSPECTION / CLEANING OF RESERVOIRS

1 M.G. & ABOVE - EVERY 5 YEARS

1 M.G. & BELOW - EVERY 2 YEARS

RESERVOIR	CAPACITY	1990	1991	1992	1993	1994	1995	1996
SHANDIN HILLS	219,000				Jul-93			
MOUNTAIN 1	2.0					Mar-94		
RIDGELINE	0.12		Nov-91					
MOUNTAIN 2	223,000					Jan-94		
ELECTRIC DR	8.0		XX					XX
NEWMARK 2	7.5	Feb-92					XX	
NEWMARK 3	5.5	Feb-92					XX	
NEWMARK 4	8.9	Feb-92					XX	
SYCAMORE 1	2.5					Apr-94		XX
SYCAMORE 2	448,000					Jan-94		
SYCAMORE 3	4.5		XX		Mar-93			
COLLEGE	2.5					Mar-94		
DEVIL CYN	220,000							
PALM AVE 1	325,000	XX				Jan-94		
PALM AVE 2	5.0					Feb-94		
MEYERS CYN	2.5		Sep-91					XX
CAJON	5.0					Feb-94		
DEVORE	2.0					Feb-94		

RESERVOIR	CAPACITY	1997	1998	1999	2000	2001	2002	2003
SHANDIN HILLS	219,000							
MOUNTAIN 1	2.0	XX						
MOUNTAIN 2	223,000	Jun-97						
RIDGELINE	0.12			Feb-99				
ELECTRIC DR	8.0		Dec-98					
NEWMARK 2	7.5		Mar-98					
NEWMARK 3	5.5		Mar-98					
NEWMARK 4	8.9		Mar-98					
SYCAMORE 1	2.5							
SYCAMORE 2	448,000	May-97						
SYCAMORE 3	4.5		XX					
COLLEGE	2.5			XX				
DEVIL CYN	220,000							
PALM AVE 1	325,000	May-97						
PALM AVE 2	5.0			XX				
MEYERS CYN	2.5							
CAJON	5.0			XX				
DEVORE	2.0			XX				

XX - Recommended

Date Completed

SAN BERNARDINO CITY WATER
BOOSTER DATA SHEET

REVISED 8/10/98

PLANT	PUMP MAKE (BOWLS)	PUMP SERIAL #	PUMP CAP G P M	MOTOR MAKE HP
SHANDIN H 1	PEERLESS	37711	153	BL 15
SHANDIN H 2	PEERLESS	83L125523	187	BL 15
MOUNTAIN #1	PEERLESS		755	US 60
MOUNTAIN #2	PEERLESS		784	US 60
MOUNTAIN #3	FRBNKS MRS		1623	TSB 125
RIDGELINE #1	BERKLEY	8T-600	747	BKL 50
RIDGELINE #2	BERKLEY	8T-600	784	BKL 50
SYCAMORE #1	FRBNKS MRS		0	FM 100
SYCAMORE #2	GOULD	39503	0	GE 125
SYCAMORE #3	SIMMONS	512B6490	3359	US 200
SYCAMORE #4	SIMMONS	512B6490	3416	US 200
WATERMAN B#1	AURORA	85-9331	2443	US 125
WATERMAN B#2	PEERLESS		2767	FM 150
WATERMAN B#3	AURORA	86-03328-1	2227	US 125
WATERMAN B#4	AURORA	86-03328-1	2192	US 125
DC COLLEGE 1	JOHNSTON		2125	NM 100
DC COLLEGE 2	JOHNSTON		2169	NM 150

MEYERS #1	GOULDS	58988	1451	US 100
12 CHC/4 STG				
MEYERS #2	GOULDS	60233	1421	US 100
12CHC/4 STG				

SAN BERNARDINO CTY WATER
WELL DATA SHEET
SYSTEM ID # 3610039

REVISED 8/10/98

PLANT	WELL		FEET		PUMP		MOTOR	MOTOR	
WELL NUMBE	DIAM	DEPTH	COLUMN	PUMP	CAP. G.P.M.	MAKE HP	SERIAL #	METER	
CAJON CYN	20"	186'	150'	GOULD/WL	1041	GE 50	USJ717127	12" HERSEY 8	
2N/5W-19000				12RJHC/2 STG					
CAJON NO. 1	20"	411'	355'	CROWN	0	HT 60		12" SPARLINC	
1N/5W-03H01				OUT OF SERVICE					
CAJON NO. 2	20"	470'	375'	GOULDS	2058	US 150	0021R025R5	12" WATER S	
1N/5W-03H00				14RJMC/3 STG					
CAJON NO. 3	20"	404'	305'	AURORA	1470	US 150	2/P11P253R04'	12" MCCROM	
1N/5W-03A02									
DEVIL CYN 1	24"	289'	255'	WRTHINGTON	1301	US 125	D-7012171	12" WATER SI	
1N/4W-08M01				12M90/5 STG					
DEVIL CYN 2	26"	450'	250'	GOULDS	0	US 150	C1001079	8" MCCROME	
1N/4W-07F01				12CHC/4 STG					
DEVIL CYN 3	8"	40'	30'	PEERLESS	173	US 3	3650998-1	4" HERSEY 8	
1N/4W-06H02									
DEVIL CYN 4	8"	62'	55'	WRTHINGTON	93	US 3	3624325	4" ROCKWEL	
1N/4W-06H01				6L-4					
DEVIL CYN 5	16"	400'	220'	GOULDS	707	NMN 100	S1301005	10" WATER S	
2N/4W-08M01				12RJLC/4 STG					
DEVIL CYN 6	14"	50'	45'	GOULDS	235	US 10	X020R164F	6" WATER SP	
				8RJHO/3 STG					
DEVIL CYN 7	14"	50'	45'	GOULDS	218	US 10	W350R053F	6" WATER SP	
				8RJHO/3 STG					
NEWMARK 1	16"	402'	310'		1289	US 150	U021R025R-6	12" WATER S	
1N/4W-16E01									
NEWMARK 2	20"	360'	340'	WRTHINGTON	1520	US 150	2/T12T226R18	12" WATER S	
1N/4W-16F02				12HH220/13 STG					
NEWMARK 3	16"	450'	280'	GOULDS	1207	US 150	2/T12T225R01	12" WATER S	
1N/4W-16E03				10CHC/9 STG					
NEWMARK 4	20"	441'	360'	FRBNKS MRSI	2092	YS 200	226413101	12" WATER S	
1N/4W-16E03				15H700/8 STG					

VINCENT	24"	199'	170'		1352	US 75	926163	12" MCCROM
<hr/>								
2N/SW-19001								
KENWOOD	20"	400'	300'	PEERLESS	1708	US 150	2/T05T018R02	12" WATER S
2N/SW-29C01				14HH/3 STG				

MOTOR SERIAL #	METER	DATE REVISED
F582	6" MCCROMETER	83-61-934
477	6" MCCROMETER	83-61-934
880598		
978319		
2Z00657		
	8" WATER SPECLS	903164
	8" WATER SPECLS	903165
	NOT IN SERVICE	
CGJ317134		
B413/T03S271R007R-5	24" WATER SPECLS	910423
B413/T03S271R006R-4	24" WATER SPECLS	910423
PC63600-127	12" HERSEY	852839
596909	12" SPARLING	22349
N04N0560558R-1	12" HERSEY	852839
N04N0560568R-2	12" HERSEY	852839
S14726505	12" MCCROMETER	80-12-258
S14772903	12" MCCROMETER	80-12-257

3A013R159M	12" MCCROMETER
4A036R210M	12" MCCROMETER

DATE
REVISED

04/13/98

3 4877

04/13/98

04/13/98

PECLS 972399 TR16/12-2

04/13/98

04/13/98

04/13/98

04/13/98

04 13 98

04/13/98

04/13/98

04/13/98

04 10 98

04/13/98

04/13/98

04/13/98

City of San Bernardino Municipal Water Department

RESERVOIR INDEX

No.	Plant	Elev.	Speci- fications	Date Const'd	File Map Number	Contractor	Contract Price	Gallon Capacity	Dimensions L., W., & H.	Type of Const'n	Roof & Floor	Remarks
26	Shandin Hills	1612'		1933	J-18			219,000	50'x50'x12'	Concrete	Concrete, w/corrugated iron roof	
11	Mountain No. 2	1633'	593	1952	H-25	C.W.D.	\$14,276.00	223,000	10'H, 64' Dia.	Wood Shingle Roof	Concrete w/Mastic & Okum Floor	Roof Burned off Nov. 1980
12	Mountain No. 3	1633'	721	1964	U-30	Consolidated Western Steel		2,000,000	24'H, 120'Dia.	Steel		
44	Ridgeline		1154	Sep., 1990		Spless Const. Co., Inc.		100,000	8'H x 50' Dia.	Steel	Steel	APN: 151- 281-18
5	Electric Dr.	1415'	511 & 512	1937	N-11	C.W.D. & W.P.A.		8,000,000	34'x204'22'	Reinforced Concrete Fl., Slope Wall	Compressed Oakum Aleco Joint Filer	R/W Col. - Gal. Roofing
13	Newmark No. 2	1416'	708	1955	U-14	Foot & Adams	\$ 249,449.00	7,500,000	294'x214'x16'	Reinforced Concrete, w/8" Roof	Reinforced Concrete Fl.	Labr. Stop & Sealant on Floor & Walls, by C.W.D.
14	Newmark No 3	1416'	708	1963	K-10	Bakker Inc.	\$ 238,484.00	5,500,000	214'x214'x16'	Reinforced Concrete, w/8" Roof Slab	Reinforced Concrete Fl., w/Coast Pro. Seal	Labr. Stop & Sealant on Floor & Walls, by Contr.
15	Newmark No. 4	1416'	741	1968	Z-27	Lomar Corp.	\$ 387,900.00	8,900,000	294'x254'x16'	Reinforced Concrete, w/Labr. Stop & Sealant	Reinforced Concrete Fl., w/Labr. Stop & Sealant	Polyurithane material by: Superior (Installed over #1)
28	Sycamore No 1	1580'	662	1959	R-25 (7-A5)			1,500,000	40'H x 105' Dia.	Steel		

City of San Bernardino Municipal Water Department												
RESERVOIR INDEX												
No.	Plant	Elev.	Speci- fications	Date Const'd	File Map Number	Contractor	Contract Price	Gallon Capacity	Dimensions L., W., & H.	Type of Const'n	Roof & Floor	Remarks
1	Antil	1053'	808	Dec. 1953	A-17	J. Putnam Henck	\$ 20,240.00	258,000	73x43.4x11.8	Concrete - Corrugated Iron roof	Labyrinth Waterstop	
2	College (DC#2)	1720'	728	1984	U-40			2,580,000	32'H, 120 Dia.	Steel		
3	Del Rosa No.1	1513'	803		F-11			480,000	36'H, 48' Dia.	Steel + Roof		
4	Del Rosa No.2	1513'	842	1957	P-28			190,000	18'H, 44' Dia.	Steel + Roof		
5	Electric Dr.	1415'	511 & 512	1937	N-11	C.W.D. & W.P.A.		8,000,000	34'x204'x22'	Reinforced Concrete Fl., Slope Wall	Compressed Oakum Aleco Joint Filer	R/W Col. - Gal. Roofing
6	Gilbert St	1130'	598	1953	E-17		\$ 41,000.00	108,000	47'x27'x13'	Wood Roof	Reinforced Concrete Fl.,	
7	Lynwood	1234.5'	617	Jan., 1955	I-37	H.P. Kingsley Co.	\$19,450.00	223,000	10'H, 64' Dia.	Wood Shingle Roof	Reinforced Concrete Fl.,	
8	Lytle Creek No. 1	1311'		1903	A-14 (10-A8)			2,333,780	195'x195'x8'	Steel Roof (1985)	Concrete Floor - Rubble Wall	
9	Lytle Creek No. 2	1247.83'	637	1957	E-28 (14-A4)	R.W. Graves w/Job Conc. Constr. Corp.	\$ 298,987.00	7,500,000	294'x213'x16'	Concrete Roof	Reinforced Concrete Fl., w/dirt covered roof	Prestite by C.W.D.
10	Mill & "D"	1003'		1934	J-19			437,200	100'x50'x12'	Corrugated Iron roof	Concrete	
11	Mountain No. 2	1833'	593	1952	H-25	C.W.D.	\$14,278.00	223,000	10'H, 64' Dia.	Wood Shingle Roof	Concrete w/Mastic & Okum Floor	Roof Burned off Nov. 1980
12	Mountain No. 3	1833'	721	1984	U-30	Consolidated Western Steel		2,000,000	24'H, 120'Dia.	Steel		
13	Newmark No. 2	1416'	708	1955	U-14	Foot & Adams	\$ 249,449.00	7,500,000	294'x214'x16'	Reinforced Concrete, w/8" Roof	Reinforced Concrete Fl.	Labr. Stop & Sealant on Floor & Walls, by C.W.D.

United States Summary
Judgment Motion -
Ex 687 Page 687

4/20/1999 - 3:18 PM

1 of 5

sweetpea: d/@data/
excel/ReservoirConst.

City of San Bernardino Municipal Water Department												
RESERVOIR INDEX												
No.	Plant	Elev.	Speci- fications	Date Const'd	File Map Number	Contractor	Contract Price	Gallon Capacity	Dimensions L., W., & H.	Type of Const'n	Roof & Floor	Remarks
14	Newmark No.3	1416'	708	1983	K-10	Bakker Inc.	\$ 238,484.00	5,500,000	214'x214'x16'	Reinforced Concrete, w/8" Roof Slab	Reinforced Concrete Fl., w/Coast Pro. Seal	Labr. Stop & Sealant on Floor & Walls, by Contr.
15	Newmark No. 4	1416'	741	1988	Z-27	Lomar Corp.	\$ 387,900.00	8,900,000	294'x254'x16'	Reinforced Concrete, w/Labr. Stop & Sealant	Reinforced Concrete Fl., w/Labr. Stop & Sealant	Polyurthane material by: Superior (Installed over #1)
16	19th Street	1241'	591	1952	C-12	J. Putnam Henck	\$ 21,188.00	258,000	72'x42.4'x13'	Concrete w/ Corrugated Iron Roof, w/ Mastic Joint Filler	Concrete, w/ Copper water stop (20 oz)	Water Stop Installed by C.W.D.
17	North "E" (25th St.)	1198'	573	1950	H-26	Bakker Inc.		122,000	10'H, 50' Dia.	Concrete, w/Wood Shingle Roof	Concrete	Mastic (Oakum), by C.W.D.
18	Perris Hill	1311'	549	1947	P-5 (8-E6)			4,070,000	95'x514'x13'	Concrete, w/ Corrugated Aluminum Sheets	Concrete, w/ .027 Ga - Tile Capping	Mastic (Oakum) by C.W.D.
19	Perris Hill (Dam)	1177'	700	1982	U-13 (15-C3)	J. Putnam Henck	\$ 408,728.00	10,000,000	340'x150'x30' (Approx.)	Concrete, w/Coast Pro Seal	Reinforced Concrete, w/Slab Roof	Installed by Contractor
20	Quail Cyn. No. 1	1776'	616	1954	M-26			40,000	18'H x 20'Dia.	Steel	Steel	Contractor
21	Quail Cyn. No. 2	1776'	641	1957	M-26			40,000	18'H x 20'Dia.	Steel	Steel	Contractor
22	Quail Cyn. (Daley Cyn.)	2101.75'	804	1972	AA-11	Burnett Contractors	\$ 184,200.00	1,250,000	114'x94'x16'	Reinforced Concrete	Concrete, w/Lab. Water Stop	Polyurthane, Installed by Contractor
23	Ridgeview	1736'	717	1983	U-21			330,000	24'Hx50' Dia.	Steel	3/32" Coal Tar Enamel on Floor.	Under-roof w/Koppers Super Tank Solution

City of San Bernardino Municipal Water Department												
RESERVOIR INDEX												
No.	Plant	Elev.	Speci- fications	Date Const'd	File Map Number	Contractor	Contract Price	Gallon Capacity	Dimensions L., W., & H.	Type of Const'n	Roof & Floor	Remarks
24	7th Street	1151'	738	May, 1965	N-40	Frank G. Furman	\$ 15,870.00	101,000	10' x 48' Dia.	Concrete, w/ Water Stop	Wood Roof - Labr. & Mastic on Floor	Coast Pro. Seal Installed by Contractor
25	17th & Sierra Way	1084'	581	1948				108,500	45'x27'x13.6'	Concrete, w/Water Stop		Mastic joint filler, by C.W.D.
26	Shandin Hills	1812'		1933	J-18			218,000	50'x50'x12'	Concrete	Concrete, w/corrugated iron roof	
27												
28	Sycamore No. 1	1580'	862	1959	R-25 (7-A5)			1,500,000	40'H x 105' Dia.	Steel		
29	Sycamore No. 2	1580'	729	1965	U-39 (9-B2)		\$ 26,480.00	448,000	32'H x 50.0' Dia.	Steel		
30	Terrace No. 2	1249'	625	1955	T-8 (3-F3)			1,180,000	36' H x 76' Dia.	Steel		
31	Terrace No. 3	1312'	672	1958	K-29			1,285,000	36' H x 80' Dia.	Steel		
32	Terrace Elevated	1383'	636	1958	P-29	Chicago Bridge & Iron	\$ 41,565.00	100,000	25' H x 28' Dia.	Steel, inside surfaces patched (including standpipe) in May, 1984 w/Coal Tar Enamel		100' to bottom of tank from ground elev.
33	30th & Mt. View			1937	K-6			97,200	40'x25'x13.6'	Concrete	Tile Roof	
34	27th & Acacia	1192'	628	1958	N-30			247,400	28'x15.4'x13'	Concrete	Reinforced Concrete, Floor & Walls	PR.395 Thick Rubber compound N.I.C. Reglet Strip by Contractor
35	Waterman Avenue	1249'	533	1948	D-28 (14-d3)	Balker Inc.	\$ 245,085.00	10,000,000	354'x234'x16'	Reinforced Concrete	Reinforced Concrete, Floor & Walls	Copper Stop & Sealant on Floor & Walls, by: C.W.D.
36	Meyers Cyn.	2090'	881	5/2/1978		American Bridge	\$ 33,295.00	210,000	24'Hx 36' Dia.	Steel	Steel	By: American Bridge

United States Summary
Judgment Motion
Ex. 101 Page 1687

RESERVOIR INDEX

[illegible]

City of San Bernardino Municipal Water Department

RESERVOIR INDEX

No.	Plant	Elev.	Speci- fications	Date Const'd	File Map Number	Contractor	Contract Price	Gallon Capacity	Dimensions L., W., & H.	Type of Const'n	Roof & Floor	Remarks
-----	-------	-------	---------------------	-----------------	--------------------	------------	-------------------	--------------------	----------------------------	--------------------	-----------------	---------

RESERVOIRS NO LONGER USED OR DESTROYED

No.	Plant	Specifi- cations	Date Const'd.	Gallon Capacity	Dimensio ns L., W., & H.	Type of Construction	Roof & Floor	Remarks				
1	3RD & "I"		1929	43,400	17.6'x63'x 15.6"	Concrete	Corrugated Iron Roof	No Reservoir (Ice Plant) Still measure well				
2	Terrace No. 1		?	98,783	46'x32'x9. 6'	Concrete	Corrugated Iron Roof	Has not been used for years - Unsafe				
3	Hanford		1920	43,300	47'x16'x8. 6'	Concrete		Reservoir Destroyed				
4	Newmark No. 1		1926	3,400,000	343'x165'x 10'	Gunita	Corrugated Iron Roof	Reservoir Destroyed				
5	South "G" Street	548	1947	407,000	96'x49.5'x 13'	Concrete	Concrete, w/Corrugated Aluminum (.027) roof	Oakum Mastic Joint filler, by C.W.D.				

STILL
HERE

Exhibit 62

1 Thomas N. Jacobson, State Bar #55127
2 GRESHAM, SAVAGE, NOLAN & TILDEN, LLP
3 600 N. Arrowhead, Suite 300
4 San Bernardino, CA 92401-1148
5 Telephone No.: (909) 884-2171
6 Facsimile No.: (909) 888-2120

7 Russell V. Randle
8 Mary Beth Bosco
9 Paul A. J. Wilson
10 PATTON BOGGS LLP
11 2550 M Street, N.W.
12 Washington, D.C. 20037
13 Telephone No.: (202) 457-6000
14 Facsimile No.: (202) 457-6315

15 Attorneys for CITY OF SAN BERNARDINO
16 MUNICIPAL WATER DEPARTMENT

17 UNITED STATES DISTRICT COURT
18 CENTRAL DISTRICT OF CALIFORNIA

19 STATE OF CALIFORNIA, on behalf of the
20 California Department of Toxic Substances
21 Control.

22 Plaintiff.

23 vs.

24 UNITED STATES OF AMERICA,
25 DEPARTMENT OF THE ARMY, and DOES

26 Defendants.

27 THE CITY OF SAN BERNARDINO
28 MUNICIPAL WATER DEPARTMENT.

Plaintiff.

vs.

UNITED STATES OF AMERICA,
DEPARTMENT OF THE ARMY, and DOES

Defendants.

) CASE NO. CV 96-5205 MRP (JGx)
) CASE NO. CV 96-8867 MRP (JGx)
) (Consolidated cases)

) PLAINTIFF CITY OF SAN BERNARDINO
) MUNICIPAL WATER DEPARTMENT'S
) RESPONSE TO DEFENDANT'S SECOND
) SET OF REQUESTS FOR ADMISSION

) Judge: The Honorable Mariana R. Pfaelzer

538
EXHIBIT
FOR IDENTIFICATION
THEODORA M. KELLY,
6-7-92
WITNESS *Alldstadt*

GENERAL OBJECTIONS

The City of San Bernardino (the City) objects to the "Definitions" and "Instructions" stated in Defendant's Second Set of Requests for Admission to the extent that would impose any obligations on the City beyond or at variance with the specific requirements of Fed. R. Civ. P. 36 and such other provisions of the Federal Rules that apply to a party responding to requests for admission. The City further objects generally to the "Definitions" in those Requests to the extent that they conflict with or would alter terms defined by the statute governing this proceeding. The City also objects to the definition of the terms "Newmark-Muscoy Superfund Site" and "The Site." That definition is objectionable insofar as the City's unqualified acceptance of it might be construed as the City's acquiescence to the proposition that the Site comprises two separate groundwater contaminant plumes, rather than a single plume that forms two lobes as it flows on either side of the Shandin Hills. The City categorically does not accept as fact the existence of two separate contaminant plumes, and its answers to the following Requests for Admission should be construed accordingly.

REQUEST FOR ADMISSION NO. 136: The City of San Bernardino is a "person" within the meaning of section 101(21) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601.21.

RESPONSE TO REQUEST FOR ADMISSION NO. 136: Admit.

REQUEST FOR ADMISSION NO. 137: The City of San Bernardino Municipal Water Department is a department of the City of San Bernardino.

RESPONSE TO REQUEST FOR ADMISSION NO. 137: Deny.

REQUEST FOR ADMISSION NO. 138: The City of San Bernardino Municipal Water Department is a "person" within the meaning of section 101(21) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U. S. C. § 9601.21.

RESPONSE TO REQUEST FOR ADMISSION NO. 138: Admit.

REQUEST FOR ADMISSION NO. 139: Maximum Contaminant Levels ("MCLs") for PCE and TCE have been established pursuant to the Safe Drinking Water Act, 42 U.S. C. § 300f. et seq. at 5 micrograms per liter (5 parts per billion("ppb.")).

RESPONSE TO REQUEST FOR ADMISSION NO. 139:

Admit that current MCLs for

PCE and TCE are 5 ug/l.

REQUEST FOR ADMISSION NO. 140: In 1981, the State of California began sampling groundwater wells in the San Bernardino area within an area known as Bunker Hill Basin.

RESPONSE TO REQUEST FOR ADMISSION NO. 140:

The City possesses no

documents or other information which would enable it to state conclusively whether the State of California began sampling groundwater wells in the Bunker Hill Basin in 1981, and therefore denies the request.

REQUEST FOR ADMISSION NO. 141: When the State sampled groundwater during the 1980s in Bunker Hill Basin, it detected TCE and PCE in the groundwater at levels in excess of the allowable levels set by the U.S. Government and the State.

RESPONSE TO REQUEST FOR ADMISSION NO. 141:

Admit.

REQUEST FOR ADMISSION NO. 142: Prior to 1981, the City disposed of waste at the San Bernardino County landfill located near Cajon Boulevard ("Cajon Landfill").

RESPONSE TO REQUEST FOR ADMISSION NO. 142:

Admit.

REQUEST FOR ADMISSION NO. 143: Prior to 1981, the City disposed of municipal waste at the Cajon Landfill.

RESPONSE TO REQUEST FOR ADMISSION NO. 143:

Admit.

REQUEST FOR ADMISSION NO. 144: Prior to 1981, the City disposed of industrial waste at the Cajon Landfill.

RESPONSE TO REQUEST FOR ADMISSION NO. 144:

Admit.

REQUEST FOR ADMISSION NO. 145: Prior to 1981, the City disposed of commercial waste at the Cajon Landfill.

RESPONSE TO REQUEST FOR ADMISSION NO. 145:

Admit.

REQUEST FOR ADMISSION NO. 146: Prior to 1981, the City disposed of liquid waste at the Cajon Landfill.

RESPONSE TO REQUEST FOR ADMISSION NO. 146:

Deny.

1 **REQUEST FOR ADMISSION NO. 147:** Prior to 1981, the City disposed of waste at
2 the **Cajon Landfill** that was generated at the City's vehicle maintenance yards.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 147:** Admit.

4 **REQUEST FOR ADMISSION NO. 148:** Prior to 1981, the City arranged for the
5 disposal of waste generated at the City's vehicle maintenance yards at the **Cajon Landfill**.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 148:** Deny.

7 **REQUEST FOR ADMISSION NO. 149:** Prior to 1981, the City transported waste
8 generated at the City's vehicle maintenance yards to the **Cajon Landfill**.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 149:** Admit.

10 **REQUEST FOR ADMISSION NO.150:** The **Cajon Landfill** is hydrogeologically
11 upgradient from the groundwater contamination at the **Site**.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 150:** Deny.

13 **REQUEST FOR ADMISSION NO. 151:** Wells that are hydrogeologically
14 downgradient from the **Cajon Landfill** have tested positive for **TCE**.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 151:** Object because the Request is
16 vague and ambiguous: Defendant fails define or otherwise to describe its use of the term
17 "hydrogeologically downgradient" in the context of this Request or to identify the wells to which
18 Defendant refers. Subject to that objection, the City admits that some wells that can be described
19 as hydrogeologically downgradient from the **Cajon Landfill** have tested positive for **TCE** while
20 some wells that can be described as hydrogeologically downgradient from the **Cajon Landfill**
21 have **not tested** positive for **TCE**.

22 **REQUEST FOR ADMISSION NO. 152:** Wells that are hydrogeologically
23 downgradient from the **Cajon Landfill** have tested positive for **PCE**.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 152:** Object because the Request is
25 vague and ambiguous: Defendant fails define or otherwise to describe its use of the term
26 "hydrogeologically downgradient" in the context of this Request or to identify the wells to which
27 Defendant refers. Subject to that objection, the City admits that some wells that can be described
28 as hydrogeologically downgradient from the **Cajon Landfill** have tested positive for **PCE** while

1 some wells that can be described as hydrogeologically downgradient from the Cajon Landfill
2 have not tested positive for PCE.

3 **REQUEST FOR ADMISSION NO. 153:** TCE from the Cajon Landfill has
4 contributed to the groundwater contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 153:** Deny.

6 **REQUEST FOR ADMISSION NO. 154:** PCE from the Cajon Landfill has contributed
7 to the groundwater contamination at the Site.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 154:** Deny.

9 **REQUEST FOR ADMISSION NO.155:** Prior to 1981, the City owned maintenance
10 and/or repair facilities for its motor vehicles at locations that are hydrogeologically upgradient
11 from the groundwater contamination at the Newmark/Muscoy Superfund Site.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 155:** Deny.

13 **REQUEST FOR ADMISSION NO.156:** Prior to 1981, the City operated maintenance
14 and or repair facilities for its motor vehicles at locations that are hydrogeologically upgradient
15 from the groundwater contamination at the Newmark/Muscoy Superfund Site.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 156:** Deny.

17 **REQUEST FOR ADMISSION NO. 157:** Prior to 1981, the City owned maintenance
18 facilities for its vehicles on land located above the groundwater contamination at the
19 Newmark/Muscoy Superfund Site.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 157:** Deny.

21 **REQUEST FOR ADMISSION NO. 158:** Prior to 1981, the City operated maintenance
22 facilities for its vehicles on land located above the groundwater contamination at the
23 Newmark/Muscoy Superfund Site.

24 **RESPONSE TO REQUEST FOR ADMISSION NO.158:** Deny.

25 **REQUEST FOR ADMISSION NO. 159:** Prior to 1981, motor vehicle repair was an
26 activity conducted at the City's vehicle maintenance facilities.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 159:** Admit.

28
United States Summary
Judgment Motion,
Ex. 62, Page 696

1 **REQUEST FOR ADMISSION NO. 160:** Prior to 1981, the degreasing of parts was an
2 activity conducted at the City's vehicle maintenance facilities.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 160:** Admit.

4 **REQUEST FOR ADMISSION NO. 161:** Prior to 1981, TCE was used for degreasing
5 motor vehicle parts during maintenance and/or repair activities conducted at the City's vehicle
6 maintenance facilities.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 161:** Deny.

8 **REQUEST FOR ADMISSION NO. 162:** Prior to 1981, PCE was used for degreasing
9 motor vehicle or other parts during maintenance and/or repair activities conducted at the City's
10 vehicle maintenance facilities.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 162:** Deny.

12 **REQUEST FOR ADMISSION NO. 163:** Prior to 1981, materials containing TCE
13 were used for degreasing motor vehicle or other parts during maintenance and/or repair activities
14 conducted at the City's vehicle maintenance facilities.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 163:** Deny.

16 **REQUEST FOR ADMISSION NO. 164:** Prior to 1981, materials containing PCE
17 were used for degreasing motor vehicle or other parts during maintenance and/or repair activities
18 conducted at the City's vehicle maintenance facilities.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 164:** Deny.

20 **REQUEST FOR ADMISSION NO. 165:** Prior to 1981, following its use for
21 degreasing motor vehicle parts or other equipment, the City discharged materials containing TCE
22 into the sanitary sewer system at or adjacent to the City's vehicle maintenance facilities.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 165:** Deny.

24 **REQUEST FOR ADMISSION NO. 166:** Prior to 1981, following its use for
25 degreasing motor vehicle parts or other equipment, the City discharged materials containing PCE
26 into the sanitary sewer system at or adjacent to the City's vehicle maintenance facilities.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 166:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 697

1 **REQUEST FOR ADMISSION NO. 167:** Prior to 1981, following its use for
2 **degreasing** motor vehicle parts or other equipment, the City discharged materials containing TCE
3 into the storm sewer system at or adjacent to the City's vehicle maintenance facilities.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 167:** Deny.

5 **REQUEST FOR ADMISSION NO. 168:** Prior to 1981, following its use for
6 degreasing motor vehicle parts or other equipment, the City discharged materials containing PCE
7 into the storm sewer system at or adjacent to the City's vehicle maintenance facilities.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 168:** Deny.

9 **REQUEST FOR ADMISSION NO. 169:** Prior to 1981, following its use for
10 degreasing motor vehicle parts or other equipment, the City discharged materials containing TCE
11 into cesspools or pits at the City's vehicle maintenance facilities.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 169:** Deny.

13 **REQUEST FOR ADMISSION NO. 170:** Prior to 1981, following its use for
14 degreasing motor vehicle parts or other equipment, the City discharged materials containing PCE
15 into cesspools or pits at the City's vehicle maintenance facilities.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 170:** Deny.

17 **REQUEST FOR ADMISSION NO. 171:** Prior to 1981, following its use for
18 degreasing motor vehicle parts or other equipment, the City discharged materials containing TCE
19 onto the ground at the City's vehicle maintenance facilities.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 171:** Deny.

21 **REQUEST FOR ADMISSION NO. 172:** Prior to 1981, following its use for
22 **degreasing** motor vehicle parts or other equipment, the City discharged materials containing PCE
23 onto the ground at the City's vehicle maintenance facilities.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 172:** Deny.

25 **REQUEST FOR ADMISSION NO. 173:** The City's vehicle maintenance facilities are
26 hydrogeologically upgradient from the groundwater contamination at the Site.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 173:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 698

1 **REQUEST FOR ADMISSION NO. 174:** Wells that are hydrogeologically
2 downgradient from the City's vehicle maintenance facilities have tested positive for TCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 174:** Object because the Request is
4 vague and ambiguous: Defendant does not define or otherwise describe its use of the term
5 "hydrogeologically downgradient" in the context of this Request, and it does not specify the
6 wells to which the Request refers. Deny.

7 **REQUEST FOR ADMISSION NO. 175:** Wells that are hydrogeologically
8 downgradient from the City's vehicle maintenance facilities have tested positive for PCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 175:** Object because the Request is
10 vague and ambiguous: Defendant does not define or otherwise describe its use of the term
11 "hydrogeologically downgradient" in the context of this Request, and it does not specify the
12 wells to which the Request refers. Deny.

13 **REQUEST FOR ADMISSION NO. 176:** TCE from the City's vehicle maintenance
14 facilities contributed to the groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 176:** Deny.

16 **REQUEST FOR ADMISSION NO. 177:** PCE from the City's vehicle maintenance
17 facilities contributed to the groundwater contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 177:** Deny.

19 **REQUEST FOR ADMISSION NO. 178:** In 1982, the State of California Department
20 of Health Services ("DHS") sampled water contained in several of the City's water reservoirs.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 178:** The City possesses no
22 documents which would enable it to state conclusively whether the State of California
23 Department of Health Services sampled water contained in several of the City's water reservoirs
24 in 1982 and therefore denies the Request.

25 **REQUEST FOR ADMISSION NO. 179:** When DHS sampled the water contained in
26 the City's reservoirs, it detected TCE in the water at levels in excess of the allowable levels set
27 by the U.S. Government and the State.

28
United States Summary
Judgment Motion,
Ex. 62, Page 699

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 179:**

2 Object because the request is
3 vague and ambiguous: Defendant does not specify the reservoir(s) allegedly tested. The City
4 possesses no documents which would enable it to state conclusively whether DHS detected TCE
5 in the water of any of its reservoirs at levels in excess of the allowable levels set by the U.S.
6 Government and the State and therefore denies this Request.

7 **REQUEST FOR ADMISSION NO. 180:** When DHS sampled the water contained in
8 the City's reservoirs, it detected PCE in the water at levels in excess of the allowable levels set by
9 the U.S. Government and the State.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 180:**

11 Object because the request is
12 vague and ambiguous: Defendant does not specify the reservoir(s) allegedly tested. The City
13 possesses no documents which would enable it to state conclusively whether DHS detected PCE
14 in the water of any of its reservoirs at levels in excess of the allowable levels set by the U.S.
15 Government and the State and therefore denies this Request.

16 **REQUEST FOR ADMISSION NO. 181:** The source of the TCE found in the City's
17 water reservoirs was the interior coating materials, which contained TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 181:**

19 Deny.

20 **REQUEST FOR ADMISSION NO. 182:** The source of the TCE found in the City's
21 water reservoirs was the material used to thin the interior coating material prior to its application
22 to the interior surface of the reservoirs.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 182:**

24 Deny.

25 **REQUEST FOR ADMISSION NO. 183:** The source of the PCE found in the City's
26 water reservoirs was the interior coating materials, which contained PCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 183:**

28 Deny.

REQUEST FOR ADMISSION NO. 184: The water contained in the City's water
reservoirs was found to contain concentrations in excess of 100 ppb of TCE.

RESPONSE TO REQUEST FOR ADMISSION NO. 184:

Object because the Request is
vague and ambiguous: Defendant fails to specify the reservoir(s) tested, or provide any reference
to the sample referred to in the Request, hence the City denies this Request.

1 **REQUEST FOR ADMISSION NO. 185:** The water contained in the City's water
2 **reservoirs** was found to contain concentrations as high as 810 ppb of PCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 185:** Object because the Request is
4 vague and ambiguous; Defendant fails to specify the reservoir(s) tested, or provide any reference
5 to the sample referred to in the Request, hence the City denies this Request.

6 **REQUEST FOR ADMISSION NO. 186:** The City drained TCE contaminated water
7 from City's water reservoirs onto the ground.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 186:** Deny.

9 **REQUEST FOR ADMISSION NO. 187:** The City drained PCE contaminated water
10 from the City's water reservoirs onto the ground.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 187:** Deny.

12 **REQUEST FOR ADMISSION NO. 188:** The City drained TCE contaminated water
13 from the City's water reservoirs into the sanitary sewers.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 188:** Deny.

15 **REQUEST FOR ADMISSION NO. 189:** The City drained PCE contaminated water
16 from the City's water reservoirs into the sanitary sewers.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 189:** Deny.

18 **REQUEST FOR ADMISSION NO. 190:** The City drained TCE contaminated water
19 from the City's water reservoirs into the storm sewers.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 190:** Object because the Request is
21 vague and ambiguous; Defendant fails to specify the reservoir(s) to which the Request pertains.
22 Admit that if any water contaminated with TCE were drained from any of the City's reservoirs it
23 would have been discharged into an adjacent storm drain.

24 **REQUEST FOR ADMISSION NO. 191:** The City drained PCE contaminated water
25 from the City's water reservoirs into the storm sewers.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 191:** Object because the Request is
27 vague and ambiguous; Defendant fails to specify the reservoir(s) to which the Request pertains.

28
United States Summary
Judgment Motion,
Ex. 62, Page 701

1 Admit that if any water contaminated with PCE were drained from any of the City's reservoirs it
2 would have been discharged into an adjacent storm drain.

3 **REQUEST FOR ADMISSION NO. 192:** The City's reservoirs that tested positive for
4 TCE and PCE are hydrogeologically upgradient from the groundwater contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 192:** Object because the Request is
6 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
7 "hydrogeologically upgradient" in the context of this Request and does not specify the
8 reservoir(s) to which the Request pertains. Deny.

9 **REQUEST FOR ADMISSION NO. 193:** Certain wells that have tested positive for
10 TCE are hydrogeologically downgradient from the City's reservoirs that tested positive for TCE
11 and PCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 193:** Object because the Request is
13 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
14 "hydrogeologically downgradient" in the context of this Request, does not specify the
15 reservoir(s) to which the Request pertains, and does not identify to which wells the Request
16 refers. Subject to that objection, the City admits that some wells that have tested positive for
17 TCE can be described as downgradient from the City's reservoirs that tested positive for TCE
18 and PCE and that some wells that can be described as downgradient from the City's reservoirs
19 that tested positive for TCE and PCE have not tested positive for TCE.

20 **REQUEST FOR ADMISSION NO. 194:** Certain wells that have tested positive for
21 PCE are hydrogeologically downgradient from the City's reservoirs that tested positive for TCE
22 and PCE.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 194:** Object because the Request is
24 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
25 "hydrogeologically downgradient" in the context of this Request, does not specify the
26 reservoir(s) to which the Request pertains, and does not identify to which wells the Request
27 refers. Subject to that objection, the City admits that some wells that have tested positive for
28 PCE can be described as downgradient from the City's reservoirs that tested positive for TCE and

1 PCE and that some wells that can be described as downgradient from the City's reservoirs have
2 not tested positive for PCE.

3 **REQUEST FOR ADMISSION NO. 195:** Contaminated water from the City's
4 reservoirs contributed to the TCE groundwater contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 195:** Deny.

6 **REQUEST FOR ADMISSION NO. 196:** Contaminated water from the City's
7 reservoirs contributed to the PCE groundwater contamination at the Site.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 196:** Deny.

9 **REQUEST FOR ADMISSION NO. 197:** In 1981, the City's water distribution system
10 was divided into 14 zones according to pressure differentials based on the topography of the
11 City.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 197:** Admit.

13 **REQUEST FOR ADMISSION NO. 198:** The City's design criteria, used to formulate
14 the 14 zones, was to maintain from 40 to 125 pounds per square inch static pressure in any
15 particular zone.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 198:** Admit that maintaining from
17 40 to 125 psi static pressure in any particular zone was a design criterion used to formulate the
18 14 zones.

19 **REQUEST FOR ADMISSION NO. 199:** In 1981, the City estimated water losses due
20 to leakage from transmission and distribution lines at approximately 10%.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 199:** Deny.

22 **REQUEST FOR ADMISSION NO. 200:** In 1981, the upper region of the City's water
23 distribution zones included the following zones: 2100, 1895, 1720, Sycamore, Mountain,
24 Ridgeview, Quail Canyon, Del Rosa, Upper, and Shandin Hills.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 200:** Admit.

26 **REQUEST FOR ADMISSION NO. 201:** Prior to 1981, the City maintained the water
27 pressure in the 2100 Zone above 40 psi.

28

United States Summary
Judgment Motion,
Ex. 62, Page 703

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 201:** Unable to admit or deny as
2 stated because pressure in the 2100 zone varied with change in elevation from the water source.

3 **REQUEST FOR ADMISSION NO. 202:** Prior to 1981, the City lost water in the 2100
4 Zone due to leaks in underground distribution lines.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 202:** Documents to which the City
6 must refer to respond to this Request are in the control of Defendant. The City will supplement
7 its Response to Defendant's Second Set of Requests for Admission with a response to this
8 Request after Defendant has completed its review of the records made available to it by the City
9 and returned them to the unrestricted control of the City, and the City has had an opportunity to
10 search for the information necessary to enable it to admit or deny this Request.

11 **REQUEST FOR ADMISSION NO. 203:** Prior to 1981, the 2100 Zone received water
12 from the Meyers Canyon Reservoir.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 203:** Admit.

14 **REQUEST FOR ADMISSION NO. 204:** Prior to 1981, the Meyers Canyon Reservoir
15 was constructed out of steel.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 204:** Admit that prior to 1981 a
17 reservoir at Meyers Canyon was constructed out of steel.

18 **REQUEST FOR ADMISSION NO. 205:** Prior to 1981, the City used a cold-applied
19 coal tar coating to line the interior surface of the Meyers Canyon Reservoir.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 205:** Deny.

21 **REQUEST FOR ADMISSION NO. 206:** Prior to 1981, the materials the City applied
22 to the interior of the Meyers Canyon Reservoir contained TCE.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 206:** Deny.

24 **REQUEST FOR ADMISSION NO. 207:** Prior to 1981, the materials the City applied
25 to the interior of the Meyers Canyon Reservoir contained PCE.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 207:** Deny.

27
28

United States Summary
Judgment Motion,
Ex. 602, Page 704

1 **REQUEST FOR ADMISSION NO. 208:** Prior to 1981, after applying coating
2 **materials** to the interior surface, the City disinfected and drained water from the Meyers Canyon
3 Reservoir.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 208:** Deny.

5 **REQUEST FOR ADMISSION NO. 209:** Prior to 1981, the water drained from the
6 Meyers Canyon Reservoir contained TCE.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 209:** Deny.

8 **REQUEST FOR ADMISSION NO. 210:** Prior to 1981, the water drained from the
9 Meyers Canyon Reservoir contained PCE.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 210:** Deny.

11 **REQUEST FOR ADMISSION NO. 211:** Prior to 1981, the City drained TCE
12 contaminated water from the Meyers Canyon Reservoir onto the ground.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 211:** Deny.

14 **REQUEST FOR ADMISSION NO. 212:** Prior to 1981, the City drained PCE
15 contaminated water from the Meyers Canyon Reservoir onto the ground.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 212:** Deny.

17 **REQUEST FOR ADMISSION NO. 213:** The City drained TCE contaminated water
18 from the Meyers Canyon Reservoir into the sanitary sewer system.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 213:** Deny.

20 **REQUEST FOR ADMISSION NO. 214:** The City drained PCE contaminated water
21 from the Meyers Canyon Reservoir into the sanitary sewer system.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 214:** Deny.

23 **REQUEST FOR ADMISSION NO. 215:** The City drained TCE contaminated water
24 from the Meyers Canyon Reservoir into the storm sewer system.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 215:** Deny.

26 **REQUEST FOR ADMISSION NO. 216:** The City drained PCE contaminated water
27 from the Meyers Canyon Reservoir into the storm sewer system.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 216:** Deny.

1 **REQUEST FOR ADMISSION NO. 217:** The Meyers Canyon Reservoir is
2 hydrogeologically upgradient from the groundwater contamination at the Site.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 217:** Admit.

4 **REQUEST FOR ADMISSION NO.218:** Wells hydrogeologically downgradient from
5 the Meyers Canyon Reservoir have tested positive for TCE.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 218:** *Object because the Request
7 is vague and ambiguous. Defendant fails to define or otherwise describe its use of the term
8 "hydrogeologically downgradient in the context of this Request and to identify the wells to
9 which the Request refers. Subject to that objection, the City admits that some wells that can be
10 described as hydrogeologically downgradient from the Palm Avenue Reservoir have tested
11 positive for TCE while some wells that can be described generally as hydrogeologically
12 downgradient from the Meyers canyon Reservoir have not tested positive for TCE.

13 **REQUEST FOR ADMISSION NO. 219:** Wells hydrogeologically downgradient from
14 the Meyers Canyon Reservoir have tested positive for PCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 219:** Object because the Request is
16 vague and ambiguous. The City admits that some wells hydrogeologically downgradient from
17 the Meyers Canyon Reservoir have tested positive for PCE while other wells hydrogeologically
18 downgradient from that reservoir have not tested positive for PCE.

19 **REQUEST FOR ADMISSION NO. 220:** Water, which was contaminated with TCE
20 and PCE from the interior coating in the Meyer Canyon Reservoir, drained from the Meyers
21 Canyon Reservoir and contributed to the TCE groundwater contamination at the Site.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 220:** Deny.

23 **REQUEST FOR ADMISSION NO. 221:** Water, which was contaminated with TCE
24 and PCE from the interior coating in the Meyers Canyon Reservoir, drained from the Meyers
25 Canyon Reservoir and contributed to the PCE groundwater contamination at the Site.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 221:** Deny.

27 **REQUEST FOR ADMISSION NO. 222:** Water from the Meyers Canyon Reservoir
28 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked

1 from underground distribution lines in the 2100 Zone and contributed to the TCE contamination
2 at the Site.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 222:** Deny.

4 **REQUEST FOR ADMISSION NO. 223:** Water from the Meyers Canyon Reservoir
5 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
6 from underground distribution lines in the 2100 Zone and contributed to the PCE groundwater
7 contamination at the Site.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 223:** Deny.

9 224. Prior to 1981, the City maintained the water pressure in the 1895 Zone above 40
10 psi.

11 **RESPONSE TO REQUEST FOR ADMISSION NO.:** Unable to admit or deny as stated
12 because the pressure in the 1895 zone varied with change in elevation from the water source.

13 **REQUEST FOR ADMISSION NO. 225:** Prior to 1981, the City lost water in the 1895
14 Zone due to leaks in underground distribution lines.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 225:** Documents to which the City
16 must refer to respond to this Request are in the control of Defendant. The City will supplement
17 its Response to Defendant's Second Set of Requests for Admission with a response to this
18 Request after Defendant has completed its review of the records made available to it by the City
19 and returned them to the unrestricted control of the City, and the City has had an opportunity to
20 search for the information necessary to enable it to admit or deny this Request.

21 **REQUEST FOR ADMISSION NO. 226:** Prior to 1981, the 1895 Zone received water
22 from the Cajon Reservoir.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 226:** Admit.

24 **REQUEST FOR ADMISSION NO. 227:** Prior to 1981, the Cajon Reservoir was
25 constructed out of steel.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 227:** Deny.

27 **REQUEST FOR ADMISSION NO. 228:** Prior to 1981, the City used a cold-applied
28 coal tar coating to line the interior surface of the Cajon Reservoir.

United States Summary
Judgment Motion,
Ex. 602, Page 707

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 228:** Deny.

2 **REQUEST FOR ADMISSION NO. 229:** Prior to 1981, the materials the City applied
3 to the interior surface of the Cajon Reservoir contained TCE.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 229:** Deny.

5 **REQUEST FOR ADMISSION NO. 230:** Prior to 1981, the materials the City applied
6 to the interior surface of the Cajon Reservoir contained PCE.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 230:** Deny.

8 **REQUEST FOR ADMISSION NO. 231:** After applying the coating materials to the
9 interior surface, the City disinfected and drained water from the Cajon Reservoir.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 231:** Deny.

11 **REQUEST FOR ADMISSION NO. 232:** The water drained from the Cajon Reservoir
12 contained TCE.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 232:** Deny.

14 **REQUEST FOR ADMISSION NO. 233:** The water drained from the Cajon Reservoir
15 contained PCE.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 233:** Deny.

17 **REQUEST FOR ADMISSION NO. 234:** The City drained TCE contaminated water
18 from the Cajon Reservoir onto the ground.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 234:** Deny.

20 **REQUEST FOR ADMISSION NO. 235:** The City drained PCE contaminated water
21 from the Cajon Reservoir onto the ground.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 235:** Deny.

23 **REQUEST FOR ADMISSION NO. 236:** The City drained TCE contaminated water
24 from the Cajon Reservoir into the sanitary sewer system.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 236:** Deny.

26 **REQUEST FOR ADMISSION NO. 237:** The City drained PCE contaminated water
27 from the Cajon Reservoir into the sanitary sewer system.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 237:** Deny.

United States Summary
Judgment Motion,
Ex. 102, Page 708

1 **REQUEST FOR ADMISSION NO. 238.** The City drained TCE contaminated water
2 from the Cajon Reservoir into the storm sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 238:** Deny.

4 **REQUEST FOR ADMISSION NO. 239.** The City drained PCE contaminated water
5 from the Cajon Reservoir into the storm sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 239:** Deny.

7 **REQUEST FOR ADMISSION NO. 240.** The Cajon Reservoir is hydrogeologically
8 upgradient from the groundwater contamination at the Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 240:** Admit.

10 **REQUEST FOR ADMISSION NO. 241.** Wells that are hydrogeologically
11 downgradient from the Cajon Reservoir have tested positive for TCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 241:** Object because the Request is
13 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
14 "hydrogeologically downgradient in the context of this Request and to identify the wells to
15 which the Request refers. Subject to that objection, the City admits that some wells that can be
16 described as hydrogeologically downgradient from the Palm Avenue Reservoir have tested
17 positive for TCE while some wells that can be described generally as hydrogeologically
18 downgradient from the Cajon Reservoir have not tested positive for TCE.

19 **REQUEST FOR ADMISSION NO. 242.** Wells that are hydrogeologically
20 downgradient from the Cajon Reservoir have tested positive for PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 242:** Object because the Request is
22 vague and ambiguous. The City admits that some wells hydrogeologically downgradient from
23 the Cajon Reservoir have tested positive for PCE while other wells hydrogeologically
24 downgradient from that reservoir have not tested positive for PCE.

25 **REQUEST FOR ADMISSION NO. 243.** Water, which was contaminated with TCE
26 and PCE from the interior coating in the Cajon Reservoir, drained from the Cajon Reservoir and
27 contributed to the TCE groundwater contamination at the Site.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 243:** Deny.

United States Summary
Judgment Motion,
Ex. 62, Page 709

1 **REQUEST FOR ADMISSION NO. 244.** Water, which was contaminated with TCE
2 and **PCE** from the interior coating in the Cajon Reservoir, drained from the Cajon Reservoir and
3 contributed to the PCE groundwater contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 244:** Deny.

5 **REQUEST FOR ADMISSION NO. 245.** Water from the Cajon Reservoir which was
6 contaminated with TCE and PCE from the interior coating in the reservoir leaked from
7 underground distribution lines in the 1895 Zone and contributed to the TCE contamination at the
8 Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 245:** Deny.

10 **REQUEST FOR ADMISSION NO. 246.** Water from the Cajon Reservoir which was
11 contaminated with TCE and PCE from the interior coating in the reservoir leaked from
12 underground distribution lines in the 1895 Zone and contributed to the PCE groundwater
13 contamination at the Site.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 246:** Deny.

15 **REQUEST FOR ADMISSION NO. 247.** Prior to 1981, the City maintained the water
16 pressure in the 1720 Zone above 40 psi.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 247:** Unable to admit or deny as
18 stated because the pressure in the 1720 Zone varied with change in elevation from the water
19 source.

20 **REQUEST FOR ADMISSION NO. 248.** Prior to 1981, the City lost water in the 1720
21 Zone due to leaks in underground distribution lines.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 248:** Documents to which the City
23 must refer to respond to this Request are in the control of Defendant. The City will supplement
24 its Response to Defendant's Second Set of Requests for Admission with a response to this
25 Request after Defendant has completed its review of the records made available to it by the City
26 and returned them to the unrestricted control of the City, and the City has had an opportunity to
27 search for the information necessary to enable it to admit or deny this Request

1 **REQUEST FOR ADMISSION NO. 249.** Prior to 1981, the 1720 Zone received water
2 from the College Reservoir.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 249:** Admit.

4 **REQUEST FOR ADMISSION NO. 250.** Prior to 1981, the College Reservoir was
5 constructed out of steel.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 250:** Admit.

7 **REQUEST FOR ADMISSION NO. 251.** Prior to 1981, the City used a cold-applied
8 coal tar coating to line the interior of the College Reservoir.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 251:** Deny.

10 **REQUEST FOR ADMISSION NO. 252.** Prior to 1981, the materials the City applied
11 to the interior surface of the College Reservoir contained TCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 252:** Deny.

13 **REQUEST FOR ADMISSION NO. 253.** Prior to 1981, the materials the City applied
14 to the interior surface of the College Reservoir contained PCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 253:** Deny.

16 **REQUEST FOR ADMISSION NO. 254.** After applying the coating to the interior
17 surface, the City disinfected and drained water from the College Reservoir.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 254:** Deny.

19 **REQUEST FOR ADMISSION NO. 255.** The water drained from the College
20 Reservoir contained TCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 255:** Deny.

22 **REQUEST FOR ADMISSION NO. 256.** The water drained from the College
23 Reservoir contained PCE.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 256:** Deny.

25 **REQUEST FOR ADMISSION NO. 257.** The City drained TCE contaminated water
26 from the College Reservoir onto the ground.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 257:** Deny.

28

United States Summary
Judgment Motion,
Ex. 62, Page 711

Law Offices
GRESHAM, SAVAGE
NOLAN & TILDEN LLP
900 N. Arrowhead
Suite 300
San Bernardino, CA 92410
P.O. Box 111

\\S611-000\PLD\JFA Response Set 2.doc

- 19 -

PLAINTIFF'S RESPONSE TO DEFENDANT'S SECOND SET OF REQUESTS FOR ADMISSION

1 **REQUEST FOR ADMISSION NO. 258.** The City drained PCE contaminated water
2 from the College Reservoir onto the ground.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 258:** Deny.

4 **REQUEST FOR ADMISSION NO. 259.** The City drained TCE contaminated water
5 from the College Reservoir into the sanitary sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 259:** Deny.

7 **REQUEST FOR ADMISSION NO. 260.** The City drained PCE contaminated water
8 from the College Reservoir into the sanitary sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 260:** Deny.

10 **REQUEST FOR ADMISSION NO. 261.** The City drained TCE contaminated water
11 from the College Reservoir into the storm sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 261:** Deny.

13 **REQUEST FOR ADMISSION NO. 262.** The City drained PCE contaminated water
14 from the College Reservoir into the storm sewer system.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 262:** Deny.

16 **REQUEST FOR ADMISSION NO. 263.** The College Reservoir is located
17 hydrogeologically upgradient from the groundwater contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 263:** Admit

19 **REQUEST FOR ADMISSION NO. 264.** Wells that are hydrogeologically
20 downgradient from the College Reservoir have tested positive for TCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 264:** Object because the Request is
22 **vague and ambiguous:** Defendant fails to define or otherwise describe its use of the term
23 "hydrogeologically downgradient in the context of this Request and to identify the wells to
24 which the Request refers. Subject to that objection, the City admits that some wells that can be
25 described as hydrogeologically downgradient from the (Palm Avenue Reservoir) have tested
26 positive for TCE while some wells that can be described generally as hydrogeologically
27 downgradient from the College Reservoir have not tested positive for TCE.

1 **REQUEST FOR ADMISSION NO. 265.** Wells that are hydrogeologically
2 downgradient from the College Reservoir have tested positive for PCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 265:** Object because the Request is
4 vague and ambiguous. Some wells that are hydrogeologically downgradient from the College
5 Reservoir have tested positive for PCE and some wells that are hydrogeologically downgradient
6 from that reservoir have not tested positive for PCE.

7 **REQUEST FOR ADMISSION NO. 266.** Water, which was contaminated with TCE
8 and PCE from the interior coating in the College Reservoir, drained from the College Reservoir
9 and contributed to the TCE groundwater contamination at the Site.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 266:** Deny.

11 **REQUEST FOR ADMISSION NO. 267.** Water, which was contaminated with TCE
12 and PCE from the interior coating in the College Reservoir, drained from the College Reservoir
13 and contributed to the PCE groundwater contamination at the Site.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 267:** Deny.

15 **REQUEST FOR ADMISSION NO. 268.** Water from the College Reservoir which
16 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
17 underground distribution lines in the 1720 Zone and contributed to the TCE contamination at the
18 Site.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 268:** Deny.

20 **REQUEST FOR ADMISSION NO. 269.** Water from the College Reservoir which
21 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
22 underground distribution lines in the 1720 Zone and contributed to the PCE groundwater
23 contamination at the Site.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 269:** Deny.

25 **REQUEST FOR ADMISSION NO. 270.** Prior to 1981, the 1720 Zone received water
26 from the Palm Avenue Reservoir.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 270:** Admit.

1 **REQUEST FOR ADMISSION NO. 271.** Prior to 1981, the Palm Avenue Reservoir
2 was constructed out of steel.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 271:** Admit.

4 **REQUEST FOR ADMISSION NO. 272.** Prior to 1981, the City used a cold-applied
5 coal tar coating to line the interior of the Palm Avenue Reservoir.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 272:** Deny.

7 **REQUEST FOR ADMISSION NO. 273.** Prior to 1981, the materials the City applied
8 to the interior surface of the Palm Avenue Reservoir contained TCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 273:** Deny.

10 **REQUEST FOR ADMISSION NO. 274.** Prior to 1981, the materials the City applied
11 to the interior surface of the Palm Avenue Reservoir contained PCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 274:** Deny.

13 **REQUEST FOR ADMISSION NO. 275.** After applying the coating to the interior
14 surface, the City disinfected and drained water from the Palm Avenue Reservoir.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 275:** Deny.

16 **REQUEST FOR ADMISSION NO. 276.** The water drained from the Palm Avenue
17 Reservoir contained TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 276:** Deny.

19 **REQUEST FOR ADMISSION NO. 277.** The water drained from the Palm Avenue
20 Reservoir contained PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 277:** Deny.

22 **REQUEST FOR ADMISSION NO. 278.** The City drained TCE contaminated water
23 from the Palm Avenue Reservoir onto the ground.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 278:** Deny.

25 **REQUEST FOR ADMISSION NO. 279.** The City drained PCE contaminated water
26 from the Palm Avenue Reservoir onto the ground.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 279:** Deny.

28

1 **REQUEST FOR ADMISSION NO. 280.** The City drained TCE contaminated water
2 from the Palm Avenue Reservoir into the sanitary sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 280:** Deny.

4 **REQUEST FOR ADMISSION NO. 281.** The City drained PCE contaminated water
5 from the Palm Avenue Reservoir into the sanitary sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 281:** Deny.

7 **REQUEST FOR ADMISSION NO. 282.** The City drained TCE contaminated water
8 from the Palm Avenue Reservoir into the storm sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 282:** Deny.

10 **REQUEST FOR ADMISSION NO. 283.** The City drained PCE contaminated water
11 from the Palm Avenue Reservoir into the storm sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 283:** Deny.

13 **REQUEST FOR ADMISSION NO. 284.** The Palm Avenue Reservoir is
14 hydrogeologically upgradient from the groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 284:** Unable to admit or deny as
16 stated because the Palm Avenue Reservoir is within the boundaries of the groundwater
17 contamination defining the Site.

18 **REQUEST FOR ADMISSION NO. 285.** Wells that are hydrogeologically
19 downgradient from the Palm Avenue Reservoir have tested positive for TCE.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 285:** Object because the Request is
21 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
22 "hydrogeologically downgradient in the context of this Request and to identify the wells to
23 which the Request refers. Subject to that objection, the City admits that some wells that can be
24 described as hydrogeologically downgradient from the Palm Avenue Reservoir have tested
25 positive for TCE while some wells that can be described as hydrogeologically downgradient
26 from the Palm Avenue Reservoir have not. tested positive for TCE.

27 **REQUEST FOR ADMISSION NO. 286.** Wells that are hydrogeologically
28 downgradient from the Palm Avenue Reservoir have tested positive for PCE.

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 286:** Object because the Request is
2 **vague and ambiguous:** Defendant fails to define or otherwise describe its use of the term
3 "hydrogeologically downgradient in the context of this Request and to identify the wells to
4 which the Request refers. Subject to that objection, the City admits that some wells that can be
5 described as hydrogeologically downgradient from the Palm Avenue Reservoir have tested
6 positive for PCE while some wells that can be described as hydrogeologically downgradient
7 from the Palm Avenue Reservoir have not tested positive for PCE.

8 **REQUEST FOR ADMISSION NO. 287.** Water, which was contaminated with TCE
9 and PCE from the interior coating in the Palm Avenue Reservoir, drained from the Palm Avenue
10 Reservoir and contributed to the TCE groundwater contamination at the Site.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 287:** Deny.

12 **REQUEST FOR ADMISSION NO. 288.** Water, which was contaminated with TCE
13 and PCE from the interior coating in the Palm Avenue Reservoir, drained from the Palm Avenue
14 Reservoir and contributed to the PCE groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 288:** Deny.

16 **REQUEST FOR ADMISSION NO. 289.** Water from the Palm Avenue Reservoir
17 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
18 from underground distribution lines in the 1720 Zone and contributed to the TCE contamination
19 at the Site.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 289:** Deny.

21 **REQUEST FOR ADMISSION NO. 290.** Water from the Palm Avenue Reservoir
22 **which was** contaminated with TCE and PCE from the interior coating in the reservoir leaked
23 **from underground** distribution lines in the 1720 Zone and contributed to the PCE groundwater
24 contamination at the Site.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 290:** Deny.

26 **REQUEST FOR ADMISSION NO. 291.** Prior to 1981, the City maintained the water
27 pressure in the Sycamore Zone above 40 psi.

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 291:**

2 Unable to admit or deny as
3 stated because the pressure in the Sycamore Zone varied with change in elevation from the water
4 source.

5 **REQUEST FOR ADMISSION NO. 292.** Prior to 1981, the City had water losses in
6 the Sycamore Zone due to leaks in underground distribution lines.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 292:**

8 Documents to which the City
9 must refer to respond to this Request are in the control of Defendant. The City will supplement
10 its Response to Defendant's Second Set of Requests for Admission with a response to this
11 Request after Defendant has completed its review of the records made available to it by the City
12 and returned them to the unrestricted control of the City, and the City has had an opportunity to
13 search for the information necessary to enable it to admit or deny this Request.

14 **REQUEST FOR ADMISSION NO. 293.** Prior to 1981, the Sycamore Zone received
15 water from the Sycamore Reservoir No. 1.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 293:**

17 Admit.

18 **REQUEST FOR ADMISSION NO. 294.** Prior to 1981, the Sycamore Reservoir No. 1
19 was constructed out of steel.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 294:**

21 Admit.

22 **REQUEST FOR ADMISSION NO. 295.** Prior to 1981, the City used a cold-applied
23 coal tar coating to line the interior of the Sycamore Reservoir No. 1.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 295:**

25 Admit that the top two feet of
26 the Sycamore Reservoir No. 1, which is the overflow area that has no contact with water, and the
27 roof of that reservoir were coated with "T&O Bitumastic," a cold-applied, coal-tar coating, and
28 that the remainder of the interior of that reservoir was coated with a hot-applied Bitumastic
coating.

29 **REQUEST FOR ADMISSION NO. 296.** Prior to 1981, the materials the City applied
30 to the interior of the Sycamore Reservoir No. 1 contained TCE.

31 **RESPONSE TO REQUEST FOR ADMISSION NO. 296:**

32 The City does not possess
33 sufficient information to enable it to state conclusively whether the T&O Bitumastic coating

1 applied to the non-water contact overflow area of the Sycamore Reservoir No. 1 contained TCE
2 and therefore denies this Request.

3 **REQUEST FOR ADMISSION NO. 297.** Prior to 1981, the materials the City applied
4 to the interior of the Sycamore Reservoir No. 1 contained PCE.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 297:** The City does not possess
6 sufficient information to enable it to state conclusively whether the T&O Bitumastic coating
7 applied to the non-water contact overflow area of the Sycamore Reservoir No. 1 contained PCE
8 and therefore denies this Request

9 **REQUEST FOR ADMISSION NO. 298.** After applying the coating to the interior
10 surface, the City disinfected and drained water from the Sycamore Reservoir No. 1.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 298:** Deny.

12 **REQUEST FOR ADMISSION NO. 299.** The water drained from the Sycamore
13 Reservoir No. 1 contained TCE.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 299:** Deny.

15 **REQUEST FOR ADMISSION NO. 300.** The water drained from the Sycamore
16 eservoir No. 1 contained PCE.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 300:** Deny.

18 **REQUEST FOR ADMISSION NO. 301.** The City drained TCE contaminated water
19 from the Sycamore Reservoir No. 1 onto the ground.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 301:** Deny.

21 **REQUEST FOR ADMISSION NO. 302.** The City drained PCE contaminated water
22 from the Sycamore Reservoir No. 1 onto the ground.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 302:** Deny.

24 **REQUEST FOR ADMISSION NO. 303.** The City drained TCE contaminated water
25 from the Sycamore Reservoir No. 1 into the sanitary sewer system.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 303:** Deny.

27 **REQUEST FOR ADMISSION NO. 304.** The City drained PCE contaminated water
28 from the Sycamore Reservoir No. 1 into the sanitary sewer system.

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 304:** Deny.

2 **REQUEST FOR ADMISSION NO. 305.** The City drained TCE contaminated water
3 from the Sycamore Reservoir No. 1 into the storm sewer system.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 305:** Deny.

5 **REQUEST FOR ADMISSION NO. 306.** The City drained PCE contaminated water
6 from the Sycamore Reservoir No. 1 into the storm sewer system.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 306:** Deny.

8 **REQUEST FOR ADMISSION NO. 307.** The Sycamore Reservoir No. 1 is located
9 hydrogeologically upgradient from the groundwater contamination at the Site.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 307:** Admit.

11 **REQUEST FOR ADMISSION NO. 308.** Wells that are hydrogeologically
12 downgradient from the Sycamore Reservoir No. 1 have tested positive for TCE.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 308:** Object because the Request is
14 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
15 "hydrogeologically downgradient in the context of this Request and to identify the wells to
16 which the Request refers. Subject to that objection, the City admits that some wells that can be
17 described as hydrogeologically downgradient from the Palm Avenue Reservoir have tested
18 positive for TCE while some wells that can be described generally as hydrogeologically
19 downgradient from the Sycamore Reservoir No. 1 have not tested positive for TCE.

20 **REQUEST FOR ADMISSION NO. 309.** Wells that are hydrogeologically
21 downgradient from the Sycamore Reservoir No. 1 have tested positive for PCE.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 309:** Object because the Request is
23 vague and ambiguous. The City admits that some wells hydrogeologically downgradient from
24 the Sycamore Reservoir No. 1 have tested positive for PCE while other wells hydrogeologically
25 downgradient from that reservoir have not tested positive for PCE.

26 **REQUEST FOR ADMISSION NO. 310.** Water, which was contaminated with TCE
27 and PCE from the interior coating in the Sycamore Reservoir, drained from the Sycamore
28 Reservoir No. 1 and contributed to the TCE groundwater contamination at the Site.

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 310:** Deny.

2 **REQUEST FOR ADMISSION NO. 311.** Water, which was contaminated with TCE
3 and PCE from the interior coating in the Sycamore Reservoir, drained from the Sycamore
4 Reservoir No. 1 and contributed to the PCE groundwater contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 311:** Deny.

6 **REQUEST FOR ADMISSION NO. 312.** Water from the Sycamore Reservoir No. 1
7 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
8 from underground distribution lines in the Sycamore Zone and contributed to the TCE
9 contamination at the Site.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 312:** Deny.

11 **REQUEST FOR ADMISSION NO. 313.** Water from the Sycamore Reservoir No. 1
12 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
13 from underground distribution lines in the Sycamore Zone and contributed to the PCE
14 groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 313:** Deny.

16 **REQUEST FOR ADMISSION NO. 314.** Prior to 1981, the Sycamore Zone received
17 water from the Sycamore Reservoir No. 2.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 314:** Admit.

19 **REQUEST FOR ADMISSION NO. 315.** Prior to 1981, the Sycamore Reservoir No. 2
20 was constructed out of steel.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 315:** Admit.

22 **REQUEST FOR ADMISSION NO. 316.** Prior to 1981, the City used a cold-applied
23 coal tar coating to line the interior of the Sycamore Reservoir No. 2.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 316:** Deny.

25 **REQUEST FOR ADMISSION NO. 317.** Prior to 1981, the materials the City applied
26 to the interior of the Sycamore Reservoir No. 2 contained TCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 317:** Deny.

28

1 **REQUEST FOR ADMISSION NO. 318.** Prior to 1981, the materials the City applied
2 to the interior of the Sycamore Reservoir No. 2 contained PCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 318:** Deny.

4 **REQUEST FOR ADMISSION NO. 319.** After applying the coating to the interior
5 surface, the City disinfected and drained water from the Sycamore Reservoir No. 2.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 319:** Deny.

7 **REQUEST FOR ADMISSION NO. 320.** The water drained from the Sycamore
8 Reservoir No. 2 contained TCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 320:** Deny.

10 **REQUEST FOR ADMISSION NO. 321.** The water drained from the Sycamore
11 Reservoir No. 2 contained PCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 321:** Deny.

13 **REQUEST FOR ADMISSION NO. 322.** The City drained TCE contaminated water
14 from the Sycamore Reservoir No. 2 onto the ground.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 322:** Deny.

16 **REQUEST FOR ADMISSION NO. 323.** The City drained PCE contaminated water
17 from the Sycamore Reservoir No. 2 onto the ground.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 323:** Deny.

19 **REQUEST FOR ADMISSION NO. 324.** The City drained TCE contaminated water
20 from the Sycamore Reservoir No. 2 into the sanitary sewer system.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 324:** Deny.

22 **REQUEST FOR ADMISSION NO. 325.** The City drained PCE contaminated water
23 from the Sycamore Reservoir No. 2 into the sanitary sewer system.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 325:** Deny.

25 **REQUEST FOR ADMISSION NO. 326.** The City drained TCE contaminated water
26 from the Sycamore Reservoir No. 2 into the storm sewer system.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 326:** Deny.

1 **REQUEST FOR ADMISSION NO. 327.** The City drained PCE contaminated water
2 from the Sycamore Reservoir No. 2 into the storm sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 327:** Deny.

4 **REQUEST FOR ADMISSION NO. 328.** The Sycamore Reservoir No. 2 is located
5 hydrogeologically upgradient from the groundwater contamination at the Site.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 328:** Admit.

7 **REQUEST FOR ADMISSION NO. 329.** Wells that are hydrogeologically
8 downgradient from the Sycamore Reservoir No. 2 have tested positive for TCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 329:** Object because the Request is
10 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
11 "hydrogeologically downgradient" in the context of this Request and does not specify the wells
12 to which the Request pertains. Subject to this objection, the City denies that any wells
13 downgradient from the Sycamore Reservoir No. 2 not within the zone of contamination that
14 defines the Site have tested positive for TCE

15 **REQUEST FOR ADMISSION NO. 330.** Wells that are hydrogeologically
16 downgradient from the Sycamore Reservoir No. 2 have tested positive for PCE.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 330:** Object because the Request is
18 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
19 "hydrogeologically downgradient" in the context of this Request and does not specify the wells
20 to which the Request pertains. Subject to this objection, the City denies that any wells
21 downgradient from the Sycamore Reservoir No. 2 not within the zone of contamination that
22 defines the Site have tested positive for PCE.

23 **REQUEST FOR ADMISSION NO. 331.** Contaminated water drained from the
24 Sycamore Reservoir No. 2 contributed to the TCE groundwater contamination at the Site.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 331:** Deny.

26 **REQUEST FOR ADMISSION NO. 332.** Contaminated water drained from the
27 Sycamore Reservoir No. 2 contributed to the PCE groundwater contamination at the Site.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 332:** Deny.

1 **REQUEST FOR ADMISSION NO. 333.** Water from the Sycamore Reservoir No. 2
2 leaked from underground distribution lines in the Sycamore Zone and contributed to the TCE
3 contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 333:** Deny.

5 **REQUEST FOR ADMISSION NO. 334.** Water from the Sycamore Reservoir No. 2
6 leaked from underground distribution lines in the Sycamore Zone and contributed to the PCE
7 groundwater contamination at the Site.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 334:** Deny.

9 **REQUEST FOR ADMISSION NO. 335.** Prior to 1981, the City maintained the water
10 pressure in the Mountain Zone above 40 psi.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 335:** Unable to admit or deny as
12 stated because the pressure in the Mountain Zone varied with change in elevation from the water
13 source.

14 **REQUEST FOR ADMISSION NO. 336.** Prior to 1981, the City had water losses in
15 the Mountain Zone due to leaks in underground distribution lines.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 336:** Documents to which the City
17 must refer to respond to this Request are in the control of Defendant. The City will supplement
18 its Response to Defendant's Second Set of Requests for Admission with a response to this
19 Request after Defendant has completed its review of the records made available to it by the City
20 and returned them to the unrestricted control of the City, and the City has had an opportunity to
21 search for the information necessary to enable it to admit or deny this Request.

22 **REQUEST FOR ADMISSION NO. 337.** Prior to 1981, the Mountain Zone received
23 water from the Mountain Reservoir No. 1.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 337:** Admit. Responding further,
25 the City states that at some point following the destruction of the original Mountain Reservoir
26 No. 1, Mountain Reservoir No. 3 was denominated Mountain Reservoir No. 1 and is currently
27 referred to interchangeably as Mountain Reservoir No. 1 and Mountain Reservoir No. 3.

1 **REQUEST FOR ADMISSION NO. 338.** Prior to 1981, the Mountain Reservoir No. 1
2 was constructed out of steel.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 338:** As to the original Mountain
4 Reservoir No. 1, after diligent search and reasonable inquiry, the City is unable to locate
5 sufficient information to enable it to admit or deny this Request. As to the former Mountain
6 Reservoir No. 3 (see Response to Request No. 337), admit.

7 **REQUEST FOR ADMISSION NO. 339.** Prior to 1981, the City used a cold-applied
8 coal tar coating to line the interior of the Mountain Reservoir No. 1.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 339:** See Response to Request No.
10 337. As to the second Mountain Reservoir No. 1, deny; as to the original Mountain Reservoir
11 No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient
12 information to enable it to admit or deny the Request.

13 **REQUEST FOR ADMISSION NO. 340.** Prior to 1981, the materials the City applied
14 to the interior of the Mountain Reservoir No. 1 contained TCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 340:** See Response to Request No.
16 337. As to the second Mountain Reservoir No. 1, deny; as to the original Mountain Reservoir
17 No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient
18 information to enable it to admit or deny the Request.

19 **REQUEST FOR ADMISSION NO. 341.** Prior to 1981, the materials the City applied
20 to the interior of the Mountain Reservoir No. 1 contained PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 341:** See Response to Request No.
22 337. As to the second Mountain Reservoir No. 1, deny; as to the original Mountain Reservoir
23 No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient
24 information to enable it to admit or deny the Request.

25 **REQUEST FOR ADMISSION NO. 342.** After applying the coating to the interior
26 surface, the City disinfected and drained water from the Mountain Reservoir No. 1.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 342:** Object because the Request is
28 vague ambiguous See Response to Request No. 337. As to the original Mountain Reservoir No.

1. after diligent search and reasonable inquiry, the City is unable to locate sufficient information to enable it to admit or deny the Request. As to the second Mountain Reservoir No. 1, admit as to coatings applied in 1982 and/or 1983, deny as to coatings applied prior to 1981.

REQUEST FOR ADMISSION NO. 343. The water drained from the Mountain Reservoir No. 1 contained TCE.

RESPONSE TO REQUEST FOR ADMISSION NO. 343: See Response to Request No. 337. As to the second Mountain Reservoir No. 1, admit that when drained following coating in 1982, TCE was detected in the water. As to the first Mountain Reservoir No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient information to enable it to admit or deny the Request.

REQUEST FOR ADMISSION NO. 344. The water drained from the Mountain Reservoir No. 1 contained PCE.

RESPONSE TO REQUEST FOR ADMISSION NO. 344: See Response to Request No. 337. As to the second Mountain Reservoir No. 1, admit that when drained following coating in 1982, PCE was detected in the water. As to the first Mountain Reservoir No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient information to enable it to admit or deny the Request.

REQUEST FOR ADMISSION NO. 345. The City drained TCE contaminated water from the Mountain Reservoir No. 1 onto the ground.

RESPONSE TO REQUEST FOR ADMISSION NO. 345: See Response to Request No. 337. Deny.

REQUEST FOR ADMISSION NO. 346. The City drained PCE contaminated water from the Mountain Reservoir No. 1 onto the ground.

RESPONSE TO REQUEST FOR ADMISSION NO. 346: See Response to Request No. 337. Deny.

REQUEST FOR ADMISSION NO. 347. The City drained TCE contaminated water from the Mountain Reservoir No. 1 into the sanitary sewer system.

United States Summary
Judgment Motion,
Ex. 62, Page 725

RESPONSE TO REQUEST FOR ADMISSION NO. 347:

See Response to Request No.

337. Deny.

REQUEST FOR ADMISSION NO. 348. The City drained PCE contaminated water from the Mountain Reservoir No. 1 into the sanitary sewer system.

RESPONSE TO REQUEST FOR ADMISSION NO. 348:

See Response to Request No.

337. Deny.

REQUEST FOR ADMISSION NO. 349. The City drained TCE contaminated water from the Mountain Reservoir No. 1 into the storm sewer system.

RESPONSE TO REQUEST FOR ADMISSION NO. 349:

See Response to Request No.

337. As to the second Mountain Reservoir No. 1, admit that water containing TCE was discharged into the storm drain. As to the first Mountain Reservoir No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient information to enable it to admit or deny the Request.

REQUEST FOR ADMISSION NO. 350. The City drained PCE contaminated water from the Mountain Reservoir No. 1 into the storm sewer system.

RESPONSE TO REQUEST FOR ADMISSION NO. 350:

See Response to Request No.

337. As to the second Mountain Reservoir No. 1, admit that water containing PCE was discharged into the storm drain. As to the first Mountain Reservoir No. 1, after diligent search and reasonable inquiry, the City is unable to locate sufficient information to enable it to admit or deny the Request.

REQUEST FOR ADMISSION NO. 351. The Mountain Reservoir No. 1 is located hydrogeologically upgradient from the groundwater contamination at the Site.

RESPONSE TO REQUEST FOR ADMISSION NO. 351:

See Response to Request No.

337. Admit as to both Mountain Reservoirs No.1.

REQUEST FOR ADMISSION NO. 352. Wells that are hydrogeologically downgradient from the Mountain Reservoir No. 1 have tested positive for TCE.

RESPONSE TO REQUEST FOR ADMISSION NO. 352:

See Response to

Request No. 337. Object because the Request is vague and ambiguous: Defendant fails to define

1 or otherwise describe its use of the term "hydrogeologically downgradient" in the context of this
2 Request and does not identify to which wells the Request refers. Subject to that objection, the
3 City admits that some wells that have tested positive for TCE can be described as downgradient
4 from Mountain Reservoir No. 1 and that some wells that can be described as downgradient from
5 Mountain Reservoir No. 1 have not tested positive for TCE.

6 **REQUEST FOR ADMISSION NO. 353.** Wells that are hydrogeologically
7 downgradient from the Mountain Reservoir No. 1 have tested positive for PCE.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 353:** See Response to Request No.
9 337. Object because the Request is vague and ambiguous: Defendant fails to define or otherwise
10 describe its use of the term "hydrogeologically downgradient" in the context of this Request and
11 does not identify to which wells the Request refers. Subject to that objection, the City admits
12 that some wells that have tested positive for TCE can be described as downgradient from
13 Mountain Reservoir No. 1 and that some wells that can be described as downgradient from
14 Mountain Reservoir No. 1 have not tested positive for PCE.

15 **REQUEST FOR ADMISSION NO. 354.** Water, which was contaminated with TCE
16 and PCE from the interior coating in the Mountain Reservoir No. 1, drained from the Mountain
17 Reservoir No. 1 and contributed to the TCE groundwater contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 354:** See Response to Request No.
19 337. As to the original Mountain Reservoir No. 1, after diligent search and reasonable inquiry
20 the City lacks sufficient information to enable it to admit or deny this Request. As to the second
21 Mountain Reservoir No. 1, deny.

22 **REQUEST FOR ADMISSION NO. 355.** Water, which was contaminated with TCE
23 and PCE from the interior coating in the Mountain Reservoir No. 1, drained from the Mountain
24 Reservoir No. 1 and contributed to the PCE groundwater contamination at the Site.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 355:** See Response to Request No.
26 337. As to the original Mountain Reservoir No. 1, after diligent search and reasonable inquiry
27 the City is unable to locate sufficient information to enable it to admit or deny the Request. As
28 to the second Mountain Reservoir No. 1, deny.

United States Summary
Judgment Motion,
Ex. 102, Page 727

1 **REQUEST FOR ADMISSION NO. 356.** Water from the Mountain Reservoir No. 1
2 which was contaminated with TCE and PCE from the interior coating in the Mountain Reservoir
3 leaked from underground distribution lines in the Mountain Zone and contributed to the TCE
4 contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 356:** See Response to Request No.
6 337. As to the original Mountain Reservoir No. 1, after diligent search and reasonable inquiry
7 the City is unable to locate sufficient information to enable it to admit or deny the Request. As
8 to the second Mountain Reservoir No. 1, deny.

9 **REQUEST FOR ADMISSION NO. 357.** Water from the Mountain Reservoir No. 1
10 which was contaminated with TCE and PCE from the interior coating in the Mountain Reservoir
11 leaked from underground distribution lines in the Mountain Zone and contributed to the PCE
12 groundwater contamination at the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 357:** See Response to Request No.
14 337. As to the original Mountain Reservoir No. 1, after diligent search and reasonable inquiry
15 the City is unable to locate sufficient information to enable it to admit or deny the Request. As
16 to the second Mountain Reservoir No. 1, deny.

17 **REQUEST FOR ADMISSION NO. 358.** Prior to 1981, the Mountain Zone received
18 water from the Mountain Reservoir No. 2.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 358:** Admit.

20 **REQUEST FOR ADMISSION NO. 359.** Prior to 1981, the Mountain Reservoir No. 2
21 was constructed with wooden roofing materials.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 359:** Admit.

23 **REQUEST FOR ADMISSION NO. 360.** Prior to 1981, the wooden roofing material
24 used at the Mountain Reservoir No. 2 was treated to improve its resistance to water.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 360:** The City admits that the
26 applicable specification called for the wooden roofing material to be painted.

27 **REQUEST FOR ADMISSION NO. 361.** The material used to treat the wooden
28 roofing of the Mountain Reservoir No. 2 contained TCE.

United States Summary
Judgment Motion,
Ex. 162, Page 728

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 361:** Deny.

2 **REQUEST FOR ADMISSION NO. 362.** The material used to treat the wooden
3 roofing of the Mountain Reservoir No. 2 contained PCE.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 362:** Deny.

5 **REQUEST FOR ADMISSION NO. 363.** The City maintained the wooden
6 components of the Mountain Reservoir No. 2.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 363:** Admit.

8 **REQUEST FOR ADMISSION NO. 364.** The City's maintenance of the Mountain
9 Reservoir No. 2 included conditioning or treating the wood.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 364:** Admit that the City
11 "conditioned or treated" the wooden components of the Mountain Reservoir No. 2 only to the
12 extent that as part of its maintenance activities it painted certain external wooden components.
13 Deny that it "conditioned or treated" any interior wooden components of that reservoir.

14 **REQUEST FOR ADMISSION NO. 365.** After performing maintenance work on the
15 wooden components of the Mountain Reservoir No. 2, the City drained water from the reservoir.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 365:** Deny.

17 **REQUEST FOR ADMISSION NO. 366.** The water drained from the Mountain
18 Reservoir No. 2 contained TCE.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 366:** Deny.

20 **REQUEST FOR ADMISSION NO. 367.** The water drained from the Mountain
21 Reservoir No. 2 contained PCE.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 367:** Deny.

23 **REQUEST FOR ADMISSION NO. 368.** The City drained TCE contaminated water
24 from the Mountain Reservoir No. 2 onto the ground.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 368:** Deny.

26 **REQUEST FOR ADMISSION NO. 369.** The City drained PCE contaminated water
27 from the Mountain Reservoir No. 2 onto the ground.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 369:** Deny.

1 **REQUEST FOR ADMISSION NO. 370.** The City drained TCE contaminated water
2 from the Mountain Reservoir No. 2 into the sanitary sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 370:** Deny.

4 **REQUEST FOR ADMISSION NO. 371.** The City drained PCE contaminated water
5 from the Mountain Reservoir No. 2 into the sanitary sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 371:** Deny.

7 **REQUEST FOR ADMISSION NO. 372.** The City drained TCE contaminated water
8 from the Mountain Reservoir No. 2 into the storm sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 372:** Deny.

10 **REQUEST FOR ADMISSION NO. 373.** The City drained PCE contaminated water
11 from the Mountain Reservoir No. 2 into the storm sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 373:** Deny.

13 **REQUEST FOR ADMISSION NO. 374.** The Mountain Reservoir No. 2 is located
14 hydrogeologically upgradient from the groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 374:** Admit.

16 **REQUEST FOR ADMISSION NO. 375.** Wells that are hydrogeologically
17 downgradient from the Mountain Reservoir No. 2 have tested positive for TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 375:** Object because the Request is
19 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
20 "hydrogeologically downgradient" in the context of this Request and does not identify to which
21 wells the Request refers. Subject to that objection, the City admits that some wells that have
22 tested positive for TCE can be described as downgradient from Mountain Reservoir No. 2 and
23 that some wells that can be described as downgradient from Mountain Reservoir No. 2 have not
24 tested positive for TCE

25 **REQUEST FOR ADMISSION NO. 376.** Wells that are hydrogeologically
26 downgradient from the Mountain Reservoir No. 2 have tested positive for PCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 376:** Object because the Request is
28 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term

1 "hydrogeologically downgradient" in the context of this Request and does not identify to which
2 wells the Request refers. Subject to that objection, the City admits that some wells that have
3 tested positive for PCE can be described as downgradient from Mountain Reservoir No. 2 and
4 that some wells that can be described as downgradient from Mountain Reservoir No. 2 have not
5 tested positive for PCE.

6 **REQUEST FOR ADMISSION NO. 377.** Water, which was contaminated with TCE
7 and PCE from the interior coating in the Mountain Reservoir No. 2, drained from the Mountain
8 Reservoir No. 2 and contributed to the TCE groundwater contamination at the Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 377:** Deny.

10 **REQUEST FOR ADMISSION NO. 378.** Water, which was contaminated with TCE
11 and PCE from the interior coating in the Mountain Reservoir No. 2, drained from the Mountain
12 Reservoir No. 2 and contributed to the PCE groundwater contamination at the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 378:** Deny.

14 **REQUEST FOR ADMISSION NO. 379.** Water from the Mountain Reservoir No. 2
15 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
16 from underground distribution lines in the Mountain Zone and contributed to the TCE
17 contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 379:** Deny.

19 **REQUEST FOR ADMISSION NO. 380.** Water from the Mountain Reservoir No. 2
20 which was contaminated with TCE and PCE from the interior coating in the Reservoir leaked
21 from underground distribution lines in the Mountain Zone and contributed to the PCE
22 groundwater contamination at the Site.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 380:** Deny.

24 **REQUEST FOR ADMISSION NO. 381.** Prior to 1981, the City maintained the water
25 pressure in the Del Rosa Zone above 40 psi.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 381:** Unable to admit or deny as
27 stated because the pressure in the Del Rosa Zone varied with change in elevation from the water
28 source.

United States Summary
Judgment Motion,
Ex. 102, Page 731

1 **REQUEST FOR ADMISSION NO. 382.** Prior to 1981, the City had water losses in
2 the Del Rosa Zone due to leaks in underground distribution lines.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 382:** Documents to which the City
4 must refer to respond to this Request are in the control of Defendant. The City will supplement
5 its Response to Defendant's Second Set of Requests for Admission with a response to this
6 Request after Defendant has completed its review of the records made available to it by the City
7 and returned them to the unrestricted control of the City, and the City has had an opportunity to
8 search for the information necessary to enable it to admit or deny this Request

9 **REQUEST FOR ADMISSION NO. 383.** Prior to 1981, the Del Rosa Zone received
10 water from the Del Rosa Reservoir No. 1.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 383:** Admit.

12 **REQUEST FOR ADMISSION NO. 384.** Prior to 1981, the Del Rosa Reservoir No. 1
13 was constructed out of steel.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 384:** Admit.

15 **REQUEST FOR ADMISSION NO. 385.** Prior to 1981, the City used a cold-applied
16 coal tar coating to line the interior of the Del Rosa Reservoir No. 1.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 385:** Admit.

18 **REQUEST FOR ADMISSION NO. 386.** Prior to 1981, the materials the City applied
19 to the interior of the Del Rosa Reservoir No. 1 contained TCE.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 386:** Admit.

21 **REQUEST FOR ADMISSION NO. 387.** Prior to 1981, the materials the City applied
22 to the interior of the Del Rosa Reservoir No. 1 contained PCE.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 387:** Deny.

24 **REQUEST FOR ADMISSION NO. 388.** After applying the coating to the interior
25 surface, the City disinfected and drained water from the Del Rosa Reservoir No. 1.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 388:** Deny.

27 **REQUEST FOR ADMISSION NO. 389.** The water drained from the Del Rosa
28 Reservoir No. 1 contained TCE.

United States Summary
Judgment Motion,
Ex. 102, Page 732

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 389:** Deny.

2 **REQUEST FOR ADMISSION NO. 390.** The water drained from the Del Rosa
3 Reservoir No. 1 contained PCE.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 390:** Deny.

5 **REQUEST FOR ADMISSION NO. 391.** The City drained TCE contaminated water
6 from the Del Rosa Reservoir No. 1 onto the ground.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 391:** Deny.

8 **REQUEST FOR ADMISSION NO. 392.** The City drained PCE contaminated water
9 from the Del Rosa Reservoir No. 1 onto the ground.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 392:** Deny.

11 **REQUEST FOR ADMISSION NO. 393.** The City drained TCE contaminated water
12 from the Del Rosa Reservoir No. 1 into the sanitary sewer system.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 393:** Deny.

14 **REQUEST FOR ADMISSION NO. 394.** The City drained PCE contaminated water
15 from the Del Rosa Reservoir No. 1 into the sanitary sewer system.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 394:** Deny.

17 **REQUEST FOR ADMISSION NO. 395.** The City drained TCE contaminated water
18 from the Del Rosa Reservoir No. 1 into the storm sewer system.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 395:** Deny.

20 **REQUEST FOR ADMISSION NO. 396.** The City drained PCE contaminated water
21 from the Del Rosa Reservoir No. 1 into the storm sewer system.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 396:** Deny.

23 **REQUEST FOR ADMISSION NO. 397.** Prior to 1981, the Del Rosa Reservoir No. 1
24 was located hydrogeologically upgradient from the groundwater contamination at the Site.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 397:** Deny.

26 **REQUEST FOR ADMISSION NO. 398.** Wells that are hydrogeologically
27 downgradient from the Del Rosa Reservoir No. 1 have tested positive for TCE.
28

RESPONSE TO REQUEST FOR ADMISSION NO. 398:

Object because the Request is vague and ambiguous: Defendant fails to define or otherwise describe its use of the term "hydrogeologically downgradient" in the context of this Request and does not identify to which wells the Request refers. Subject to that objection, the City admits that some wells that have tested positive for TCE can be described as downgradient from the Del Rosa Reservoir No. 1 and that some wells that can be described as downgradient from the Del Rosa Reservoir No. 1 have not tested positive for TCE.

REQUEST FOR ADMISSION NO. 399. Wells that are hydrogeologically

downgradient from the Del Rosa Reservoir No. 1 have tested positive for PCE.

RESPONSE TO REQUEST FOR ADMISSION NO. 399:

Object because the Request is vague and ambiguous: Defendant fails to define or otherwise describe its use of the term "hydrogeologically downgradient" in the context of this Request and does not identify to which wells the Request refers. Subject to that objection, the City admits that some wells that have tested positive for PCE can be described as downgradient from the Del Rosa Reservoir No. 1 and that some wells that can be described as downgradient from the Del Rosa Reservoir No. 1 have not tested positive for PCE.

REQUEST FOR ADMISSION NO. 400. Water, which was contaminated with TCE

and PCE from the interior coating in the Del Rosa Reservoir No. 1, drained from the Del Rosa Reservoir No.1 and contributed to the TCE groundwater contamination at the Site.

RESPONSE TO REQUEST FOR ADMISSION NO. 400:

Deny.

REQUEST FOR ADMISSION NO. 401. Water, which was contaminated with TCE

and PCE from the interior coating in the Del Rosa Reservoir No. 1, drained from the Del Rosa Reservoir No. 1 and contributed to the PCE groundwater contamination at the Site.

RESPONSE TO REQUEST FOR ADMISSION NO. 401:

Deny.

REQUEST FOR ADMISSION NO. 402. Water from the Del Rosa Reservoir No. 1

which was contaminated with TCE and PCE from the interior coating in the reservoir leaked from underground distribution lines in the Del Rosa Zone and contributed to the TCE contamination at the Site.

United States Summary
Judgment Motion,
Ex. 102, Page 734

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 402:** Deny.

2 **REQUEST FOR ADMISSION NO. 403.** Water from the Del Rosa Reservoir No. 1
3 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
4 from underground distribution lines in the Del Rosa Zone and contributed to the PCE
5 groundwater contamination at the Site.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 403:** Deny.

7 **REQUEST FOR ADMISSION NO. 404.** Prior to 1981, the Del Rosa Zone received
8 water from the Del Rosa Reservoir No. 2.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 404:** Admit.

10 **REQUEST FOR ADMISSION NO. 405.** Prior to 1981, the Del Rosa Reservoir No. 2
11 was constructed out of steel.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 405:** Admit.

13 **REQUEST FOR ADMISSION NO. 406.** Prior to 1981, the City used a cold-applied
14 coal tar coating to line the interior of the Del Rosa Reservoir No. 2.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 406:** Admit.

16 **REQUEST FOR ADMISSION NO. 407.** Prior to 1981, the materials the City applied
17 to the interior of the Del Rosa Reservoir No. 2 contained TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 407:** Admit.

19 **REQUEST FOR ADMISSION NO. 408.** Prior to 1981, the materials the City applied
20 to the interior of the Del Rosa Reservoir No. 2 contained PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 408:** Deny.

22 **REQUEST FOR ADMISSION NO. 409.** After applying the coating to the interior
23 surface, the City disinfected and drained water from the Del Rosa Reservoir No. 2.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 409:** Deny.

25 **REQUEST FOR ADMISSION NO. 410.** The water drained from the Del Rosa
26 Reservoir No. 2 contained TCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 410:** Deny.

1 **REQUEST FOR ADMISSION NO. 411.** The water drained from the Del Rosa
2 **Reservoir No. 2** contained PCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 411:** Deny.

4 **REQUEST FOR ADMISSION NO. 412.** The City drained TCE contaminated water
5 from the Del Rosa Reservoir No. 2 onto the ground.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 412:** Deny.

7 **REQUEST FOR ADMISSION NO. 413.** The City drained PCE contaminated water
8 from the Del Rosa Reservoir No. 2 onto the ground.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 413:** Deny.

10 **REQUEST FOR ADMISSION NO. 414.** The City drained TCE contaminated water
11 from the Del Rosa Reservoir No. 2 into the sanitary sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 414:** Deny.

13 **REQUEST FOR ADMISSION NO. 415.** The City drained PCE contaminated water
14 from the Del Rosa Reservoir No. 2 into the sanitary sewer system.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 415:** Deny.

16 **REQUEST FOR ADMISSION NO. 416.** The City drained TCE contaminated water
17 from the Del Rosa Reservoir No. 2 into the storm sewer system.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 416:** Deny.

19 **REQUEST FOR ADMISSION NO. 417.** The City drained PCE contaminated water
20 from the Del Rosa Reservoir No. 2 into the storm sewer system.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 417:** Deny.

22 **REQUEST FOR ADMISSION NO. 418.** Prior to 1981, the Del Rosa Reservoir No. 2
23 was **located** hydrogeologically upgradient from the groundwater contamination at the Site.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 418:** Deny.

25 **REQUEST FOR ADMISSION NO. 419.** Wells that are hydrogeologically
26 downgradient from the Del Rosa Reservoir No. 2 have tested positive for TCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 419:** Object because the Request is
28 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term

1 "hydrogeologically downgradient" in the context of this Request and does not identify to which
2 wells the Request refers. Subject to that objection, the City admits that some wells that have
3 tested positive for TCE can be described as downgradient from the Del Rosa Reservoir No. 2 and
4 that some wells that can be described as downgradient from the Del Rosa Reservoir No. 2 have
5 not tested positive for TCE

6 **REQUEST FOR ADMISSION NO. 420.** Wells that are hydrogeologically
7 downgradient from the Del Rosa Reservoir No. 2 have tested positive for PCE.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 420:** Object because the Request is
9 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
10 "hydrogeologically downgradient" in the context of this Request and does not identify to which
11 wells the Request refers. Subject to that objection, the City admits that some wells that have
12 tested positive for PCE can be described as downgradient from the Del Rosa Reservoir No. 2 and
13 that some wells that can be described as downgradient from the Del Rosa Reservoir No. 2 have
14 not tested positive for PCE.

15 **REQUEST FOR ADMISSION NO. 421.** Water, which was contaminated with TCE
16 and PCE from the interior coating in the Del Rosa Reservoir No. 2, drained from the Del Rosa
17 Reservoir No. 2 and contributed to the TCE groundwater contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 421:** Deny.

19 **REQUEST FOR ADMISSION NO. 422.** Water, which was contaminated with TCE
20 and PCE from the interior coating in the Del Rosa Reservoir No. 2, drained from the Del Rosa
21 Reservoir No. 2 and contributed to the PCE groundwater contamination at the Site.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 422:** Deny.

23 **REQUEST FOR ADMISSION NO. 423.** Water from the Del Rosa Reservoir No. 2
24 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
25 from underground distribution lines in the Del Rosa Zone and contributed to the TCE
26 contamination at the Site.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 423:** Deny.

28
United States Summary
Judgment Motion,
Ex. 622, Page 737

1 **REQUEST FOR ADMISSION NO. 424.** Water from the Del Rosa Reservoir No. 2
2 **which was** contaminated with TCE and PCE from the interior coating in the reservoir leaked
3 from underground distribution lines in the Del Rosa Zone and contributed to the PCE
4 groundwater contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 424:** Deny.

6 **REQUEST FOR ADMISSION NO. 425.** Prior to 1981, the City maintained the water
7 pressure in the Upper Zone above 40 psi.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 425:** Unable to admit or deny as
9 stated because the pressure in the Upper zone varied with change in elevation from the water
10 source.

11 **REQUEST FOR ADMISSION NO. 426.** Prior to 1981, the City had water losses in
12 the Upper Zone due to leaks in underground distribution lines.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 426:** Documents to which the City
14 must refer to respond to this Request are in the control of Defendant. The City will supplement
15 its Response to Defendant's Second Set of Requests for Admission with a response to this
16 Request after Defendant has completed its review of the records made available to it by the City
17 and returned them to the unrestricted control of the City, and the City has had an opportunity to
18 search for the information necessary to enable it to admit or deny this Request.

19 **REQUEST FOR ADMISSION NO. 427.** Prior to 1981, the Upper Zone received
20 water from the Newmark Reservoir.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 427:** Admit.

22 **REQUEST FOR ADMISSION NO. 428.** Prior to 1981, the Newark Reservoir was
23 constructed out of steel.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 428:** Deny.

25 **REQUEST FOR ADMISSION NO. 429.** Prior to 1981, the City used a cold-applied
26 coal tar coating to line the interior of the Newmark Reservoir.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 429:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 738

1 **REQUEST FOR ADMISSION NO. 430.** Prior to 1981, the materials the City applied
2 to the interior of the Newmark Reservoir contained TCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 430:** Deny.

4 **REQUEST FOR ADMISSION NO. 431.** Prior to 1981, the materials the City applied
5 to the interior of the Newmark Reservoir contained PCE.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 431:** Deny.

7 **REQUEST FOR ADMISSION NO. 432.** After applying the coating to the interior
8 surface, the City disinfected and drained water from the Newmark Reservoir.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 432:** Deny.

10 **REQUEST FOR ADMISSION NO. 433.** The water drained from the Newmark
11 Reservoir contained TCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 433:** Deny.

13 **REQUEST FOR ADMISSION NO. 434.** The water drained from the Newmark
14 Reservoir contained PCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 434:** Deny.

16 **REQUEST FOR ADMISSION NO. 435.** The City drained TCE contaminated water
17 from the Newmark Reservoir onto the ground.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 435:** Deny.

19 **REQUEST FOR ADMISSION NO. 436.** The City drained PCE contaminated water
20 from the Newmark Reservoir onto the ground.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 436:** Deny.

22 **REQUEST FOR ADMISSION NO. 437.** The City drained TCE contaminated water
23 from the Newmark Reservoir into the sanitary sewer system.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 437:** Deny.

25 **REQUEST FOR ADMISSION NO. 438.** The City drained PCE contaminated water
26 from the Newmark Reservoir into the sanitary sewer system.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 438:** Deny.

28

United States Summary
Judgment Motion,
Ex. 62, Page 739

1 **REQUEST FOR ADMISSION NO. 439.** The City drained TCE contaminated water
2 from the Newmark Reservoir into the storm sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 439:** Deny.

4 **REQUEST FOR ADMISSION NO. 440.** The City drained PCE contaminated water
5 from the Newmark Reservoir into the storm sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 440:** Deny.

7 **REQUEST FOR ADMISSION NO. 441.** Prior to 1981, the Newmark Reservoir was
8 located hydrogeologically upgradient from the groundwater contamination at the Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 441:** Deny.

10 **REQUEST FOR ADMISSION NO. 442.** Wells that are hydrogeologically
11 downgradient from the Newmark Reservoir have tested positive for TCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 442:** Object because the Request is
13 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
14 "hydrogeologically downgradient" in the context of this Request and does not identify to which
15 wells the Request refers. Subject to that objection, the City admits that some wells that have
16 tested positive for TCE can be described as downgradient from the Newmark Reservoir and that
17 some wells that can be described as downgradient from the Newmark Reservoir have not tested
18 positive for TCE.

19 **REQUEST FOR ADMISSION NO. 443.** Wells that are hydrogeologically
20 downgradient from the Newmark Reservoir have tested positive for PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 443:** Object because the Request is
22 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
23 "hydrogeologically downgradient" in the context of this Request and does not identify to which
24 wells the Request refers. Subject to that objection, the City admits that some wells that have
25 tested positive for PCE can be described as downgradient from the Newmark Reservoir and that
26 some wells that can be described as downgradient from the Newmark Reservoir have not tested
27 positive for PCE.

28
United States Summary
Judgment Motion,
Ex. 622, Page 740

1 **REQUEST FOR ADMISSION NO. 444.** Water, which was contaminated with TCE
2 and **PCE** from the interior coating in the Newmark Reservoir, drained from the Newmark
3 Reservoir and contributed to the TCE groundwater contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 444:** Deny.

5 **REQUEST FOR ADMISSION NO. 445.** Water, which was contaminated with TCE
6 and PCE from the interior coating in the Newmark Reservoir, drained from the Newmark
7 Reservoir and contributed to the PCE groundwater contamination at the Site.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 445:** Deny.

9 **REQUEST FOR ADMISSION NO. 446.** Water from the Newmark Reservoir which
10 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
11 underground distribution lines in the Upper Zone and contributed to the TCE contamination at
12 the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 446:** Deny.

14 **REQUEST FOR ADMISSION NO. 447.** Water from the Newmark Reservoir which
15 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
16 underground distribution lines in the Upper Zone and contributed to the PCE groundwater
17 contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 447:** Deny.

19 **REQUEST FOR ADMISSION NO. 448.** Prior to 1981, the Upper Zone received
20 water from the Electric Drive Reservoir.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 448:** Admit.

22 **REQUEST FOR ADMISSION NO. 449.** Prior to 1981, the Electric Drive Reservoir
23 was constructed out of steel.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 449:** Deny.

25 **REQUEST FOR ADMISSION NO. 450.** Prior to 1981, the City used a cold-applied
26 coal tar coating to line the interior of the Electric Drive Reservoir.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 450:** Deny.

28

United States Summary
Judgment Motion,
Ex. 102, Page 741

1 **REQUEST FOR ADMISSION NO. 451.** Prior to 1981, the materials the City applied
2 to the interior of the Electric Drive Reservoir contained TCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 451:** Deny.

4 **REQUEST FOR ADMISSION NO. 452.** Prior to 1981, the materials the City applied
5 to the interior of the Electric Drive Reservoir contained PCE.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 452:** Deny.

7 **REQUEST FOR ADMISSION NO. 453.** After applying the coating to the interior
8 surface, the City disinfected and drained water from the Electric Drive Reservoir.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 453:** Deny.

10 **REQUEST FOR ADMISSION NO. 454.** The water drained from the Electric Drive
11 Reservoir contained TCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 454:** Deny.

13 **REQUEST FOR ADMISSION NO. 455.** The water drained from the Electric Drive
14 Reservoir contained PCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 455:** Deny.

16 **REQUEST FOR ADMISSION NO. 456.** The City drained TCE contaminated water
17 from the Electric Drive Reservoir onto the ground.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 456:** Deny.

19 **REQUEST FOR ADMISSION NO. 457.** The City drained PCE contaminated water
20 from the Electric Drive Reservoir onto the ground.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 457:** Deny.

22 **REQUEST FOR ADMISSION NO. 458.** The City drained TCE contaminated water
23 from the Electric Drive Reservoir into the sanitary sewer system.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 458:** Deny.

25 **REQUEST FOR ADMISSION NO. 459.** The City drained PCE contaminated water
26 from the Electric Drive Reservoir into the sanitary sewer system.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 459:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 742

1 **REQUEST FOR ADMISSION NO. 460.** The City drained TCE contaminated water
2 from the Electric Drive Reservoir into the storm sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 460:** Deny.

4 **REQUEST FOR ADMISSION NO. 461.** The City drained PCE contaminated water
5 from the Electric Drive Reservoir into the storm sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 461:** Deny.

7 **REQUEST FOR ADMISSION NO. 462.** Prior to 1981, the Electric Drive Reservoir
8 was located hydrogeologically upgradient from the groundwater contamination at the Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 462:** Admit.

10 **REQUEST FOR ADMISSION NO. 463.** Wells that are hydrogeologically
11 downgradient from the Electric Drive Reservoir have tested positive for TCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 463:** Object because the Request is
13 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
14 "hydrogeologically downgradient" in the context of this Request and does not identify to which
15 wells the Request refers. Subject to that objection, the City admits that some wells that have
16 tested positive for TCE can be described as downgradient from the Electric Drive Reservoir and
17 that some wells that can be described as downgradient from the Electric Drive Reservoir have
18 not tested positive for TCE.

19 **REQUEST FOR ADMISSION NO. 464.** Wells that are hydrogeologically
20 downgradient from the Electric Drive Reservoir have tested positive for PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 464:** Object because the Request is
22 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
23 "hydrogeologically downgradient" in the context of this Request and does not identify to which
24 wells the Request refers. Subject to that objection, the City admits that some wells that have
25 tested positive for PCE can be described as downgradient from the Electric Drive Reservoir and
26 that some wells that can be described as downgradient from the Electric Drive Reservoir have
27 not tested positive for PCE
28

United States Summary
Judgment Motion,
Ex. 62, Page 743

1 **REQUEST FOR ADMISSION NO. 465.** Water, which was contaminated with TCE
2 and PCE from the interior coating in the Electric Drive Reservoir, drained from the Electric
3 Drive Reservoir and contributed to the TCE groundwater contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 465:** Deny.

5 **REQUEST FOR ADMISSION NO. 466.** Water, which was contaminated with TCE
6 and PCE from the interior coating in the Electric Drive Reservoir, drained from the Electric
7 Drive Reservoir and contributed to the PCE groundwater contamination at the Site.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 466:** Deny.

9 **REQUEST FOR ADMISSION NO. 467.** Water from the Electric Drive Reservoir
10 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
11 from underground distribution lines in the Upper Zone and contributed to the TCE contamination
12 at the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 467:** Deny.

14 **REQUEST FOR ADMISSION NO. 468.** Water from the Electric Drive Reservoir
15 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
16 from underground distribution lines in the Upper Zone and contributed to the PCE groundwater
17 contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 468:** Deny.

19 **REQUEST FOR ADMISSION NO. 469.** Prior to 1981, the City maintained the water
20 pressure in the Shandin Hill Zone above 40 psi.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 469:** Unable to admit or deny as
22 stated **because** the pressure in the Shandin Hill Zone varied with change in elevation from the
23 **water source.**

24 **REQUEST FOR ADMISSION NO. 470.** Prior to 1981, the City had water losses in
25 the Shandin Hill Zone due to leaks in underground distribution lines.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 470:** Documents to which the City
27 must refer to respond to this Request are in the control of Defendant. The City will supplement
28 its Response to Defendant's Second Set of Requests for Admission with a response to this

1 Request after Defendant has completed its review of the records made available to it by the City
2 and returned them to the unrestricted control of the City, and the City has had an opportunity to
3 search for the information necessary to enable it to admit or deny this Request.

4 REQUEST FOR ADMISSION NO. 471. Prior to 1981, the Shandin Hills Zone
5 received water from the Shandin Hills Reservoir.

6 RESPONSE TO REQUEST FOR ADMISSION NO. 471: Deny.

7 REQUEST FOR ADMISSION NO. 472. Prior to 1981, the Shandin Hills Reservoir
8 was constructed out of steel or iron.

9 RESPONSE TO REQUEST FOR ADMISSION NO. 472: Deny.

10 REQUEST FOR ADMISSION NO. 473. Prior to 1981, the City used a cold-applied
11 coal tar coating to line the interior of the Shandin Hills Reservoir.

12 RESPONSE TO REQUEST FOR ADMISSION NO. 473: Deny.

13 REQUEST FOR ADMISSION NO. 474. Prior to 1981, the materials the City applied
14 to the interior of the Shandin Hills Reservoir contained TCE.

15 RESPONSE TO REQUEST FOR ADMISSION NO. 474: Deny.

16 REQUEST FOR ADMISSION NO. 475. Prior to 1981, the materials the City applied
17 to the interior of the Shandin Hills Reservoir contained PCE.

18 RESPONSE TO REQUEST FOR ADMISSION NO. 475: Deny.

19 REQUEST FOR ADMISSION NO. 476. After applying the coating to the interior
20 surface, the City disinfected and drained water from the Shandin Hills Reservoir.

21 RESPONSE TO REQUEST FOR ADMISSION NO. 476: Deny.

22 REQUEST FOR ADMISSION NO. 477. The water drained from the Shandin Hills
23 Reservoir contained TCE.

24 RESPONSE TO REQUEST FOR ADMISSION NO. 477: Deny.

25 REQUEST FOR ADMISSION NO. 478. The water drained from the Shandin Hills
26 Reservoir contained PCE.

27 RESPONSE TO REQUEST FOR ADMISSION NO. 478: Deny.

28
United States Summary
Judgment Motion,
Ex. 102, Page 745

1 **REQUEST FOR ADMISSION NO. 479.** The City drained TCE contaminated water
2 from the Shandin Hills Reservoir onto the ground.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 479:** Deny.

4 **REQUEST FOR ADMISSION NO. 480.** The City drained PCE contaminated water
5 from the Shandin Hills Reservoir onto the ground.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 480:** Deny.

7 **REQUEST FOR ADMISSION NO. 481.** The City drained TCE contaminated water
8 from the Shandin Hills Reservoir into the sanitary sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 481:** Deny.

10 **REQUEST FOR ADMISSION NO. 482.** The City drained PCE contaminated water
11 from the Shandin Hills Reservoir into the sanitary sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 482:** Deny.

13 **REQUEST FOR ADMISSION NO. 483.** The City drained TCE contaminated water
14 from the Shandin Hills Reservoir into the storm sewer system.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 483:** Deny.

16 **REQUEST FOR ADMISSION NO. 484.** The City drained PCE contaminated water
17 from the Shandin Hills Reservoir into the storm sewer system.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 484:** Deny.

19 **REQUEST FOR ADMISSION NO. 485.** Prior to 1981, the Shandin Hills Reservoir
20 was located hydrogeologically upgradient from the groundwater contamination at the Site.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 485:** Deny: the Shandin Hills
22 **Reservoir** is located within the area of groundwater contamination that defines the Site.

23 **REQUEST FOR ADMISSION NO. 486.** Wells that are hydrogeologically
24 downgradient from the Shandin Hills Reservoir have tested positive for TCE.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 486:** Object because the Request is
26 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
27 "hydrogeologically downgradient" in the context of this Request and does not identify to which
28 wells the Request refers. Subject to that objection, the City admits that some wells that have

1 tested positive for TCE can be described as downgradient from Shandin Hills Reservoir and that
2 some wells that can be described as downgradient from Shandin Hills Reservoir have not tested
3 positive for TCE.

4 **REQUEST FOR ADMISSION NO. 487.** Wells that are hydrogeologically
5 downgradient from the Shandin Hills Reservoir have tested positive for PCE.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 487:** Object because the Request is
7 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
8 "hydrogeologically downgradient" in the context of this Request and does not identify to which
9 wells the Request refers. Subject to that objection, the City admits that some wells that have
10 tested positive for PCE can be described as downgradient from Shandin Hills Reservoir and that
11 some wells that can be described as downgradient from Shandin Hills Reservoir have not tested
12 positive for PCE

13 **REQUEST FOR ADMISSION NO. 488.** Water, which was contaminated with TCE
14 and PCE from the interior coating in the Shandin Hills Reservoir, drained from the Shandin Hills
15 Reservoir and contributed to the TCE groundwater contamination at the Site.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 488:** Deny.

17 **REQUEST FOR ADMISSION NO. 489.** Water, which was contaminated with TCE
18 and PCE from the interior coating in the Shandin Hills Reservoir, drained from the Shandin Hills
19 Reservoir and contributed to the PCE groundwater contamination at the Site.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 489:** Deny.

21 **REQUEST FOR ADMISSION NO. 490.** Water from the Shandin Hills Reservoir
22 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
23 from underground distribution lines in the Shandin Hill Zone and contributed to the TCE
24 contamination at the Site.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 490:** Deny.

26 **REQUEST FOR ADMISSION NO. 491.** Water from the Shandin Hills Reservoir
27 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
28

United States Summary
Judgment Motion,
Ex. 62, Page 747

1 from underground distribution lines in the Shandin Hill Zone and contributed to the PCE
2 groundwater contamination at the Site.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 491:** Deny.

4 **REQUEST FOR ADMISSION NO. 492.** Prior to 1981, the City maintained a
5 reservoir known as the "North 'E' Street Reservoir".

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 492:** Admit.

7 **REQUEST FOR ADMISSION NO. 493.** Prior to 1981, the City had water losses in
8 the Zone fed by the North E Street Reservoir due to leaks in underground distribution lines.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 493:** Documents to which the City
10 must refer to respond to this Request are in the control of Defendant. The City will supplement
11 its Response to Defendant's Second Set of Requests for Admission with a response to this
12 Request after Defendant has completed its review of the records made available to it by the City
13 and returned them to the unrestricted control of the City, and the City has had an opportunity to
14 search for the information necessary to enable it to admit or deny this Request.

15 **REQUEST FOR ADMISSION NO. 494.** Prior to 1981, the City maintained the water
16 pressure in the Zone fed by North E Street Reservoir above 40 psi.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 494:** Unable to admit or deny as
18 stated because the pressure in the Zone fed by the North E Street Reservoir varied with change in
19 elevation from the water source.

20 **REQUEST FOR ADMISSION NO. 495.** Prior to 1981, the North E Street Reservoir
21 was constructed with wooden roofing materials.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 495:** Admit.

23 **REQUEST FOR ADMISSION NO. 496.** Prior to 1981, the wooden roofing material
24 used at the North E Street Reservoir was treated to improve its resistance to water.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 496:** Deny.

26 **REQUEST FOR ADMISSION NO. 497.** The material used to treat the wooden
27 roofing of the North E Street Reservoir contained TCE.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 497:** Deny.

1 **REQUEST FOR ADMISSION NO. 498.** The material used to treat the wooden
2 roofing of the North E Street Reservoir contained PCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 498:** Deny.

4 **REQUEST FOR ADMISSION NO. 499.** The City maintained the wooden
5 components of the North E Street Reservoir.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 499:** Admit.

7 **REQUEST FOR ADMISSION NO. 500.** The City's maintenance of the North E Street
8 Reservoir included conditioning or treating the wood.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 500:** Deny.

10 **REQUEST FOR ADMISSION NO. 501.** After performing maintenance work on the
11 wooden components of the North E Street Reservoir, the City drained water from the reservoir.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 501:** Deny.

13 **REQUEST FOR ADMISSION NO. 502.** The water drained from the North E Street
14 Reservoir contained TCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 502:** Deny.

16 **REQUEST FOR ADMISSION NO. 503.** The water drained from the North E Street
17 Reservoir contained PCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 503:** Deny.

19 **REQUEST FOR ADMISSION NO. 504.** The City drained TCE contaminated water
20 from the North E Street Reservoir onto the ground.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 504:** Deny.

22 **REQUEST FOR ADMISSION NO. 505.** The City drained PCE contaminated water
23 from the North E Street Reservoir onto the ground.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 505:** Deny.

25 **REQUEST FOR ADMISSION NO. 506.** The City drained TCE contaminated water
26 from the North E Street Reservoir into the sanitary sewer system.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 506:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 749

1 **REQUEST FOR ADMISSION NO. 507.** The City drained PCE contaminated water
2 from the North E Street Reservoir into the sanitary sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 507:** Deny.

4 **REQUEST FOR ADMISSION NO. 508.** The City drained TCE contaminated water
5 from the North E Street Reservoir into the storm sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 508:** Deny.

7 **REQUEST FOR ADMISSION NO. 509.** The City drained PCE contaminated water
8 from the North E Street Reservoir into the storm sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 509:** Deny.

10 **REQUEST FOR ADMISSION NO. 510.** The North E Street Reservoir is located
11 hydrogeologically upgradient from the groundwater contamination at the Site.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 510:** Deny.

13 **REQUEST FOR ADMISSION NO. 511.** Wells that are hydrogeologically
14 downgradient from the North E Street Reservoir have tested positive for TCE.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 511:** Object because the Request is
16 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
17 "hydrogeologically downgradient" in the context of this Request and does not identify to which
18 wells the Request refers. Subject to that objection, the City admits that some wells that have
19 tested positive for TCE can be described as downgradient from the North E Street Reservoir and
20 that some wells that can be described as downgradient from North E Street Reservoir have not
21 tested positive for TCE

22 **REQUEST FOR ADMISSION NO. 512.** Wells that are hydrogeologically
23 downgradient from the North E Street Reservoir have tested positive for PCE.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 512:** Object because the Request is
25 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
26 "hydrogeologically downgradient" in the context of this Request and does not identify to which
27 wells the Request refers. Subject to that objection, the City admits that some wells that have
28 tested positive for PCE can be described as downgradient from the North E Street Reservoir and

1 that some wells that can be described as downgradient from North E Street Reservoir have not
2 tested positive for PCE.

3 **REQUEST FOR ADMISSION NO. 513.** Water, which was contaminated with TCE
4 and PCE from the interior coating in the North "E" Street Reservoir, drained from the North E
5 Street Reservoir and contributed to the TCE groundwater contamination at the Site.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 513:** Deny.

7 **REQUEST FOR ADMISSION NO. 514.** Water, which was contaminated with TCE
8 and PCE from the interior coating in the North "E" Street Reservoir, drained from the North E
9 Street Reservoir and contributed to the PCE groundwater contamination at the Site.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 514:** Deny.

11 **REQUEST FOR ADMISSION NO. 515.** Water from the North E Street Reservoir
12 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
13 from underground distribution lines and contributed to the TCE contamination at the Site.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 515:** Deny.

15 **REQUEST FOR ADMISSION NO. 516.** Water from the North E Street Reservoir
16 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
17 from underground distribution lines and contributed to the PCE groundwater contamination at
18 the Site.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 516:** Deny.

20 **REQUEST FOR ADMISSION NO. 517.** Prior to 1981, the City maintained a water
21 reservoir called the "Devore Reservoir."

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 517:** Deny.

23 **REQUEST FOR ADMISSION NO. 518.** Prior to 1981, the City had water losses in
24 the Zone fed by the Devore Reservoir due to leaks in underground distribution lines.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 518:** Deny.

26 **REQUEST FOR ADMISSION NO. 519.** Prior to 1981, the City maintained the water
27 pressure in the Zone fed by Devore Reservoir above 40 psi.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 520:** Deny.

1 **REQUEST FOR ADMISSION NO. 520.** Prior to 1981, the Devore Reservoir was
2 constructed out of steel.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 520:** Deny.

4 **REQUEST FOR ADMISSION NO. 521.** Prior to 1981, the City used a cold-applied
5 coal tar coating to line the interior of the Devore Reservoir.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 521:** Deny.

7 **REQUEST FOR ADMISSION NO. 522.** Prior to 1981, the materials the City applied
8 to the interior of the Devore Reservoir contained TCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 522:** Deny.

10 **REQUEST FOR ADMISSION NO. 523.** Prior to 1981, the materials the City applied
11 to the interior of the Devore Reservoir contained PCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 523:** Deny.

13 **REQUEST FOR ADMISSION NO. 524.** After applying the coating to the interior
14 surface, the City disinfected and drained water from the Devore Reservoir.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 524:** Deny.

16 **REQUEST FOR ADMISSION NO. 525.** The water drained from the Devore
17 Reservoir contained TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 525:** Deny.

19 **REQUEST FOR ADMISSION NO. 526.** The water drained from the Devore
20 Reservoir contained PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 526:** Deny.

22 **REQUEST FOR ADMISSION NO. 527.** The City drained TCE contaminated water
23 from the Devore Reservoir onto the ground.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 527:** Deny.

25 **REQUEST FOR ADMISSION NO. 528.** The City drained PCE contaminated water
26 from the Devore Reservoir onto the ground.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 528:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 752

1 **REQUEST FOR ADMISSION NO. 529.** The City drained TCE contaminated water
2 from the Devore Reservoir into the sanitary sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 529:** Deny.

4 **REQUEST FOR ADMISSION NO. 530.** The City drained PCE contaminated water
5 from the Devore Reservoir into the sanitary sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 530:** Deny.

7 **REQUEST FOR ADMISSION NO. 531.** The City drained TCE contaminated water
8 from the Devore Reservoir into the storm sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 531:** Deny.

10 **REQUEST FOR ADMISSION NO. 532.** The City drained PCE contaminated water
11 from the Devore Reservoir into the storm sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 532:** Deny.

13 **REQUEST FOR ADMISSION NO. 533.** Prior to 1981, the Devore Reservoir was
14 located hydrogeologically upgradient from the groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 533:** Deny.

16 **REQUEST FOR ADMISSION NO. 534.** Wells that are hydrogeologically
17 downgradient from the Devore Reservoir have tested positive for TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 534:** Object because the Request is
19 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
20 "hydrogeologically downgradient" in the context of this Request and does not identify to which
21 wells the Request refers. Subject to that objection, the City admits that some wells that have
22 tested positive for TCE can be described as downgradient from the Devore Reservoir and that
23 some wells that can be described as downgradient from Devore Reservoir have not tested
24 positive for TCE.

25 **REQUEST FOR ADMISSION NO. 535.** Wells that are hydrogeologically
26 downgradient from the Devore Reservoir have tested positive for PCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 535:** Object because the Request is
28 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term

1 "hydrogeologically downgradient" in the context of this Request and does not identify to which
2 wells the Request refers. Subject to that objection, the City admits that some wells that have
3 tested positive for PCE can be described as downgradient from the Devore Reservoir and that
4 some wells that can be described as downgradient from Devore Reservoir have not tested
5 positive for PCE.

6 **REQUEST FOR ADMISSION NO. 536.** Water, which was contaminated with TCE
7 and PCE from the interior coating in the Devore Reservoir, drained from the Devore Reservoir
8 and contributed to the TCE groundwater contamination at the Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 536:** Deny.

10 **REQUEST FOR ADMISSION NO. 537.** Water, which was contaminated with TCE
11 and PCE from the interior coating in the Devore Reservoir, drained from the Devore Reservoir
12 and contributed to the PCE groundwater contamination at the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 537:** Deny.

14 **REQUEST FOR ADMISSION NO. 538.** Water from the Devore Reservoir which was
15 contaminated with TCE and PCE from the interior coating in the reservoir leaked from
16 underground distribution lines in the Zone fed by the reservoir and contributed to the TCE
17 contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 538:** Deny.

19 **REQUEST FOR ADMISSION NO. 539.** Water from the Devore Reservoir which was
20 contaminated with TCE and PCE from the interior coating in the reservoir leaked from
21 underground distribution lines in the Zone fed by the reservoir and contributed to the PCE
22 groundwater contamination at the Site.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 539:** Deny.

24 **REQUEST FOR ADMISSION NO. 540.** Prior to 1981, the City maintained a water
25 reservoir called the "Mallory Reservoir."

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 540:** Admit.

27 **REQUEST FOR ADMISSION NO. 541.** Prior to 1981, the City had water losses in
28 the Zone fed by the Mallory Reservoir due to leaks in underground distribution lines.

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 541:** Deny.

2 **REQUEST FOR ADMISSION NO. 542.** Prior to 1981, the City maintained the water
3 pressure in the Zone fed by Mallory Reservoir above 40 psi.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 542:** Admit.

5 **REQUEST FOR ADMISSION NO. 543.** Prior to 1981, the Mallory Reservoir was
6 constructed out of steel.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 543:** Admit.

8 **REQUEST FOR ADMISSION NO. 544.** Prior to 1981, the City used a cold-applied
9 coal tar coating to line the interior of the Mallory Reservoir.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 544:** Deny.

11 **REQUEST FOR ADMISSION NO. 545.** Prior to 1981, the materials the City applied
12 to the interior of the Mallory Reservoir contained TCE.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 545:** Deny.

14 **REQUEST FOR ADMISSION NO. 546.** Prior to 1981, the materials the City applied
15 to the interior of the Mallory Reservoir contained PCE.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 546:** Deny.

17 **REQUEST FOR ADMISSION NO. 547.** After applying the coating to the interior
18 surface, the City disinfected and drained water from the Mallory Reservoir.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 547:** Deny.

20 **REQUEST FOR ADMISSION NO. 548.** The water drained from the Mallory
21 Reservoir contained TCE.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 548:** Deny.

23 **REQUEST FOR ADMISSION NO. 549.** The water drained from the Mallory
24 Reservoir contained PCE.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 549:** Deny.

26 **REQUEST FOR ADMISSION NO. 550.** The City drained TCE contaminated water
27 from the Mallory Reservoir onto the ground.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 550:** Deny.

United States Summary
Judgment Motion,
Ex. 62, Page 755

1 **REQUEST FOR ADMISSION NO. 551.** The City drained PCE contaminated water
2 from the Mallory Reservoir onto the ground.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 551:** Deny.

4 **REQUEST FOR ADMISSION NO. 552.** The City drained TCE contaminated water
5 from the Mallory Reservoir into the sanitary sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 552:** Deny.

7 **REQUEST FOR ADMISSION NO. 553.** The City drained PCE contaminated water
8 from the Mallory Reservoir into the sanitary sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 553:** Deny.

10 **REQUEST FOR ADMISSION NO. 554.** The City drained TCE contaminated water
11 from the Mallory Reservoir into the storm sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 554:** Deny.

13 **REQUEST FOR ADMISSION NO. 555.** The City drained PCE contaminated water
14 from the Mallory Reservoir into the storm sewer system.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 555:** Deny.

16 **REQUEST FOR ADMISSION NO. 556.** Prior to 1981, the Mallory Reservoir was
17 located hydrogeologically upgradient from the groundwater contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 556:** Deny.

19 **REQUEST FOR ADMISSION NO. 557.** Wells that are hydrogeologically
20 downgradient from the Mallory Reservoir have tested positive for TCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 557:** Deny.

22 **REQUEST FOR ADMISSION NO. 558.** Wells that are hydrogeologically
23 downgradient from the Mallory Reservoir have tested positive for PCE.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 558:** Deny.

25 **REQUEST FOR ADMISSION NO. 559.** Water, which was contaminated with TCE
26 and PCE from the interior coating in the Mallory Reservoir, drained from the Mallory Reservoir
27 and contributed to the TCE groundwater contamination at the Site.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 559:** Deny.

United States Summary
Judgment Motion,
Ex. 62, Page 754

1 **REQUEST FOR ADMISSION NO. 560.** Water, which was contaminated with TCE
2 and PCE from the interior coating in the Mallory Reservoir, drained from the Mallory Reservoir
3 and contributed to the PCE groundwater contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 560:** Deny.

5 **REQUEST FOR ADMISSION NO. 561.** Water from the Mallory Reservoir which
6 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
7 underground distribution lines in the Zone fed by the reservoir and contributed to the TCE
8 contamination in the Bunker Hill Basin.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 561:** Deny.

10 **REQUEST FOR ADMISSION NO. 562.** Water from the Mallory Reservoir which
11 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
12 underground distribution lines in the Zone fed by the reservoir and contributed to the PCE
13 groundwater contamination at the Site.

14 **RESPONSE TO REQUEST FOR ADMISSION NO. 562:** Deny.

15 **REQUEST FOR ADMISSION NO. 563.** Prior to 1981, the City maintained a water
16 reservoir called the "Devil Canyon Reservoir."

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 563:** Admit that prior to 1981 the
18 City maintained a water reservoir called the Devil Canyon Reservoir and a 10,000 gallon steel
19 tank that provides water to two homes which is called the Devils Canyon Domestic Water Tank.

20 **REQUEST FOR ADMISSION NO. 564.** Prior to 1981, the City had water losses in
21 the Zone fed by the Devil Canyon Reservoir due to leaks in underground distribution lines.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 564:** See Response to Request No.
23 563. Documents to which the City must refer to respond to this Request are in the control of
24 Defendant. The City will supplement its Response to Defendant's Second Set of Requests for
25 Admission with a response to this Request after Defendant has completed its review of the
26 records made available to it by the City and returned them to the unrestricted control of the City.
27 and the City has had an opportunity to search for the information necessary to enable it to admit
28 or deny this Request.

United States Summary
Judgment Motion,
Ex. 62, Page 757

1 **REQUEST FOR ADMISSION NO. 565.** Prior to 1981, the City maintained the water
2 pressure in the Zone fed by Devil Canyon Reservoir above 40 psi.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 565:** See Response to Request No.
4 563. Unable to admit or deny as stated because the pressure in Zone fed by the Devil Canyon
5 Reservoir varied with change in elevation from the water source.

6 **REQUEST FOR ADMISSION NO. 566.** Prior to 1981, the Devil Canyon Reservoir
7 was constructed out of steel.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 566:** See Response to Request No.
9 563. Deny as to the Devil Canyon Reservoir, admit as to the Devil Canyon Domestic Water
10 Tank.

11 **REQUEST FOR ADMISSION NO. 567.** Prior to 1981, the City used a cold-applied
12 coal tar coating to line the interior of the Devil Canyon Reservoir.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 567:** See Response to Request No.
14 563. Deny as to the Devil Canyon Reservoir; after diligent search and reasonable inquiry the
15 City is unable to locate sufficient information to admit or deny the Request as to the Devil
16 Canyon Domestic Water Tank.

17 **REQUEST FOR ADMISSION NO. 568.** Prior to 1981, the materials the City applied
18 to the interior of the Devil Canyon Reservoir contained TCE.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 568:** See Response to Request No.
20 563. Deny.

21 **REQUEST FOR ADMISSION NO. 569.** Prior to 1981, the materials the City applied
22 to the interior of the Devil Canyon Reservoir contained PCE.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 569:** See Response to Request No.
24 563. Deny.

25 **REQUEST FOR ADMISSION NO. 570.** After applying the coating to the interior
26 surface, the City disinfected and drained water from the Devil Canyon Reservoir.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. :570** See Response to Request No.
28 563. Deny.

United States Summary
Judgment Motion,
Ex. 62, Page 758

1 **REQUEST FOR ADMISSION NO. 571.** The water drained from the Devil Canyon
2 Reservoir contained TCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 571:** See Response to Request No.
4 563. Deny.

5 **REQUEST FOR ADMISSION NO. 572.** The water drained from the Devil Canyon
6 Reservoir contained PCE.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 572:** See Response to Request No.
8 563. Deny.

9 **REQUEST FOR ADMISSION NO. 573.** The City drained TCE contaminated water
10 from the Devil Canyon Reservoir onto the ground.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 573:** See Response to Request No.
12 563. Deny.

13 **REQUEST FOR ADMISSION NO. 574.** The City drained PCE contaminated water
14 from the Devil Canyon Reservoir onto the ground.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 574:** See Response to Request No.
16 563. Deny.

17 **REQUEST FOR ADMISSION NO. 575.** The City drained TCE contaminated water
18 from the Devil Canyon Reservoir into the sanitary sewer system.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 575:** See Response to Request No.
20 563. Deny.

21 **REQUEST FOR ADMISSION NO. 576.** The City drained PCE contaminated water
22 from the Devil Canyon Reservoir into the sanitary sewer system.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 576:** See Response to Request No.
24 563. Deny.

25 **REQUEST FOR ADMISSION NO. 577.** The City drained TCE contaminated water
26 from the Devil Canyon Reservoir into the storm sewer system.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 577:** See Response to Request No.
28 563. Deny.

United States Summary
Judgment Motion,
Ex. 62, Page 759

1 **REQUEST FOR ADMISSION NO. 578.** The City drained PCE contaminated water
2 from the Devil Canyon Reservoir into the storm sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. :** See Response to Request No. 563.
4 Deny.

5 **REQUEST FOR ADMISSION NO. 579.** Prior to 1981, the Devil Canyon Reservoir
6 was located hydrogeologically upgradient from the groundwater contamination at the Site.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 579:** Admit.

8 **REQUEST FOR ADMISSION NO. 580.** Wells that are hydrogeologically
9 downgradient from the Devil Canyon Reservoir have tested positive for TCE.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 580:** Object because the Request is
11 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
12 "hydrogeologically downgradient" in the context of this Request and does not identify to which
13 wells the Request refers. Subject to that objection, the City admits that some wells that have
14 tested positive for TCE can be described as downgradient from the Devils Canyon Reservoir and
15 that some wells that can be described as downgradient from Devils Canyon Reservoir have not
16 tested positive for TCE.

17 **REQUEST FOR ADMISSION NO. 581.** Wells that are hydrogeologically
18 downgradient from the Devil Canyon Reservoir have tested positive for PCE.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 581:** Object because the Request is
20 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
21 "hydrogeologically downgradient" in the context of this Request and does not identify to which
22 wells the Request refers. Subject to that objection, the City admits that some wells that have
23 tested positive for PCE can be described as downgradient from the Devils Canyon Reservoir and
24 that some wells that can be described as downgradient from Devils Canyon Reservoir have not
25 tested positive for PCE.

26 **REQUEST FOR ADMISSION NO. 582.** Water, which was contaminated with TCE
27 and PCE from the interior coating in the Devil Canyon Reservoir, drained from the Devil
28 Canyon Reservoir and contributed to the TCE groundwater contamination at the Site.

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 582:** Deny.

2 **REQUEST FOR ADMISSION NO. 583.** Water, which was contaminated with TCE
3 and PCE from the interior coating in the Devil Canyon Reservoir, drained from the Devil
4 Canyon Reservoir and contributed to the PCE groundwater contamination at the Site.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 583:** Deny.

6 **REQUEST FOR ADMISSION NO. 584.** Water from the Devil Canyon Reservoir
7 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
8 from underground distribution lines in the Zone fed by the reservoir and contributed to the TCE
9 contamination at the Site.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 584:** Deny.

11 **REQUEST FOR ADMISSION NO. 585.** Water from the Devil Canyon Reservoir
12 which was contaminated with TCE and PCE from the interior coating in the reservoir, leaked
13 from underground distribution lines in the Zone fed by the reservoir and contributed to the PCE
14 groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 585:** Deny.

16 **REQUEST FOR ADMISSION NO. 586.** Prior to 1981, the City maintained a water
17 reservoir called the "Water Utility Reservoir."

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 586:** Admit.

19 **REQUEST FOR ADMISSION NO. 587.** Prior to 1981, the City had water losses in
20 the Zone fed by the Water Utility Reservoir due to leaks in underground distribution lines.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 587:** After diligent search and
22 **reasonable inquiry** the City is unable to locate sufficient information to enable it to admit or deny
23 **this Request.**

24 **REQUEST FOR ADMISSION NO. 588.** Prior to 1981, the City maintained the water
25 pressure in the Zone fed by Water Utility Reservoir above 40 psi.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 588:** Unable to admit or deny as
27 stated because the pressure in the Zone fed by the Water Utility Reservoir varied with change in
28 elevation from the water source.

United States Summary
Judgment Motion,
Ex. 62, Page 761

1 **REQUEST FOR ADMISSION NO. 589.** Prior to 1981, the Water Utility Reservoir
2 was constructed out of steel.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 589:** Deny.

4 **REQUEST FOR ADMISSION NO. 590.** Prior to 1981, the City used a cold-applied
5 coal tar coating to line the interior of the Water Utility Reservoir.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 590:** Deny.

7 **REQUEST FOR ADMISSION NO. 591.** Prior to 1981, the materials the City applied
8 to the interior of the Water Utility Reservoir contained TCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 591:** Deny.

10 **REQUEST FOR ADMISSION NO. 592.** Prior to 1981, the materials the City applied
11 to the interior of the Water Utility Reservoir contained PCE.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 592:** Deny.

13 **REQUEST FOR ADMISSION NO. 593.** After applying the coating to the interior
14 surface, the City disinfected and drained water from the Water Utility Reservoir.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 593:** Deny.

16 **REQUEST FOR ADMISSION NO. 594.** The water drained from the Water Utility
17 Reservoir contained TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 594:** Deny.

19 **REQUEST FOR ADMISSION NO. 595.** The water drained from the Water Utility
20 Reservoir contained PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 595:** Deny.

22 **REQUEST FOR ADMISSION NO. 596.** The City drained TCE contaminated water
23 from the Water Utility Reservoir onto the ground.

24 **RESPONSE TO REQUEST FOR ADMISSION NO. 596:** Deny.

25 **REQUEST FOR ADMISSION NO. 597.** The City drained PCE contaminated water
26 from the Water Utility Reservoir onto the ground.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 597:** Deny.

28
United States Summary
Judgment Motion,
Ex. 62, Page 762

1 **REQUEST FOR ADMISSION NO. 598.** The City drained TCE contaminated water
2 from the Water Utility Reservoir into the sanitary sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 598:** Deny.

4 **REQUEST FOR ADMISSION NO. 599.** The City drained PCE contaminated water
5 from the Water Utility Reservoir into the sanitary sewer system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 599:** Deny.

7 **REQUEST FOR ADMISSION NO. 600.** The City drained TCE contaminated water
8 from the Water Utility Reservoir into the storm sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 600:** Deny.

10 **REQUEST FOR ADMISSION NO. 601.** The City drained PCE contaminated water
11 from the Water Utility Reservoir into the storm sewer system.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 601:** Deny.

13 **REQUEST FOR ADMISSION NO. 602.** Prior to 1981, the Water Utility Reservoir
14 was located hydrogeologically upgradient from the groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 602:** Admit.

16 **REQUEST FOR ADMISSION NO. 603.** Wells that are hydrogeologically
17 downgradient from the Water Utility Reservoir have tested positive for TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 603:** Object because the Request is
19 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term
20 "hydrogeologically downgradient" in the context of this Request and does not identify to which
21 wells the Request refers. Subject to that objection, the City admits that some wells that have
22 tested **positive** for TCE can be described as downgradient from the Water Utility Reservoir and
23 that **some** wells that can be described as downgradient from Water Utility Reservoir have not
24 tested positive for TCE.

25 **REQUEST FOR ADMISSION NO. 604.** Wells that are hydrogeologically
26 downgradient from the Water Utility Reservoir have tested positive for PCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 604:** Object because the Request is
28 vague and ambiguous: Defendant fails to define or otherwise describe its use of the term

1 "hydrogeologically downgradient" in the context of this Request and does not identify to which
2 wells the Request refers. Subject to that objection, the City admits that some wells that have
3 tested positive for PCE can be described as downgradient from the Water Utility Reservoir and
4 that some wells that can be described as downgradient from Water Utility Reservoir have not
5 tested positive for PCE.

6 **REQUEST FOR ADMISSION NO. 605.** Water, which was contaminated with TCE
7 and PCE from the interior coating in the Water Utility Reservoir, drained from the Water Utility
8 Reservoir and contributed to the TCE groundwater contamination at the Site.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 605:** Deny.

10 **REQUEST FOR ADMISSION NO. 606.** Water, which was contaminated with TCE
11 and PCE from the interior coating in the Water Utility Reservoir, drained from the Water Utility
12 Reservoir and contributed to the PCE groundwater contamination at the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 606:** Deny.

14 **REQUEST FOR ADMISSION NO. 607.** Water from the Water Utility Reservoir
15 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
16 from underground distribution lines in the Zone fed by the reservoir and contributed to the TCE
17 contamination at the Site.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 607:** Deny.

19 **REQUEST FOR ADMISSION NO. 608.** Water from the Water Utility Reservoir
20 which was contaminated with TCE and PCE from the interior coating in the reservoir leaked
21 from underground distribution lines in the Zone fed by the reservoir and contributed to the PCE
22 groundwater contamination at the Site.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 608:** Deny.

24 **REQUEST FOR ADMISSION NO. 609.** Prior to 1981, the Muscoy Mutual Water
25 Company ("Muscoy Mutual") operated a water distribution system west of I-215 and south of
26 Portola Street.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 609:** Admit.

28
United States Summary
Judgment Motion,
Ex. 62, Page 7641

1 **REQUEST FOR ADMISSION NO. 610.** The Muscoy Mutual water system was
2 connected to the City's water system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 610:** Admit.

4 **REQUEST FOR ADMISSION NO. 611.** The Muscoy Mutual water system was
5 connected to the City's water system through a 12" intertie.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 611:** Admit.

7 **REQUEST FOR ADMISSION NO. 612.** The connection between Muscoy Mutual's
8 water system and the City's water system allowed water from the Muscoy Mutual system to flow
9 into the City system.

10 **RESPONSE TO REQUEST FOR ADMISSION NO. 612:** Deny.

11 **REQUEST FOR ADMISSION NO. 613.** Prior to 1981, water flowed from the
12 Muscoy Mutual water system to the City water system.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 613:** Admit that water flowed from
14 the Muscoy Mutual water system to the Mallory system within the City water system on a
15 limited number of emergency situations.

16 **REQUEST FOR ADMISSION NO. 614.** The Muscoy Mutual water system included
17 at least one water reservoir that was constructed out of steel ("Muscoy Reservoir").

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 614:** Admit.

19 **REQUEST FOR ADMISSION NO. 615.** Prior to 1981, there were water losses in the
20 distribution Zone fed by the Muscoy Reservoir due to leaks in underground distribution lines.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 615:** Object because the Request is
22 **vague and ambiguous.** After diligent search and reasonable inquiry, the City lacks sufficient
23 information about the Muscoy Reservoir, which is owned and operated by a company with no
24 organizational relationship to the City, to admit or deny this Request.

25 **REQUEST FOR ADMISSION NO. 616.** Prior to 1981, a cold-applied coal tar coating
26 was used to line the interior of the Muscoy Reservoir.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 616:** After diligent search and
28 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy

1 Reservoir, which is owned and operated by a company with no organizational relationship to the
2 City, to admit or deny this Request.

3 **REQUEST FOR ADMISSION NO. 617.** Prior to 1981, the materials applied to the
4 interior of the Muscoy Reservoir contained TCE.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 617:** After diligent search and
6 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
7 Reservoir, which is owned and operated by a company with no organizational relationship to the
8 City, to admit or deny this Request.

9 **REQUEST FOR ADMISSION NO. 618.** Prior to 1981, the materials applied to the
10 interior of the Muscoy Reservoir contained PCE.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 618:** After diligent search and
12 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
13 Reservoir, which is owned and operated by a company with no organizational relationship to the
14 City, to admit or deny this Request.

15 **REQUEST FOR ADMISSION NO. 619.** After applying the coating to the interior
16 surface, the Muscoy Reservoir was disinfected and water was drained water from it.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 619:** After diligent search and
18 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
19 Reservoir, which is owned and operated by a company with no organizational relationship to the
20 City, to admit or deny this Request.

21 **REQUEST FOR ADMISSION NO. 620.** Water drained from the Muscoy Reservoir
22 contained TCE.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 620:** After diligent search and
24 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
25 Reservoir, which is owned and operated by a company with no organizational relationship to the
26 City, to admit or deny this Request.

27 **REQUEST FOR ADMISSION NO. 621.** Water drained from the Muscoy Reservoir
28 contained PCE.

United States Summary
Judgment Motion,
Ex. 62, Page 766

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 621:**

2 After diligent search and
3 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
4 Reservoir, which is owned and operated by a company with no organizational relationship to the
5 City, to admit or deny this Request.

6 **REQUEST FOR ADMISSION NO. 622.** TCE contaminated water from the Muscoy

7 Reservoir was drained onto the ground.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 622:**

9 After diligent search and
10 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
11 Reservoir, which is owned and operated by a company with no organizational relationship to the
12 City, to admit or deny this Request.

13 **REQUEST FOR ADMISSION NO. 623.** PCE contaminated water from the Muscoy

14 Reservoir was drained onto the ground.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 623:**

16 After diligent search and
17 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
18 Reservoir, which is owned and operated by a company with no organizational relationship to the
19 City, to admit or deny this Request.

20 **REQUEST FOR ADMISSION NO. 624.** The TCE contaminated water from the

21 Muscoy Reservoir was drained into the sanitary sewer system.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 624:**

23 After diligent search and
24 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
25 Reservoir, which is owned and operated by a company with no organizational relationship to the
26 City, to admit or deny this Request.

27 **REQUEST FOR ADMISSION NO. 625.** The PCE contaminated water from the

28 Muscoy Reservoir was drained into the sanitary sewer system.

RESPONSE TO REQUEST FOR ADMISSION NO. 625:

After diligent search and
reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
Reservoir, which is owned and operated by a company with no organizational relationship to the
City, to admit or deny this Request.

United States Summary
Judgment Motion,
Ex. 62, Page 767

1 **REQUEST FOR ADMISSION NO. 626.** The TCE contaminated water from the
2 Muscoy Reservoir was drained into the storm sewer system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 626:** After diligent search and
4 reasonable inquiry, the City unable to locate sufficient information about the Muscoy Reservoir,
5 which is owned and operated by a company with no organizational relationship to the City, to
6 admit or deny this Request.

7 **REQUEST FOR ADMISSION NO. 627.** The PCE contaminated water from the
8 Muscoy Reservoir was drained into the storm sewer system.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 627:** After diligent search and
10 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
11 Reservoir, which is owned and operated by a company with no organizational relationship to the
12 City, to admit or deny this Request.

13 **REQUEST FOR ADMISSION NO. 628.** Prior to 1981, the Muscoy Reservoir was
14 located hydrogeologically upgradient from the groundwater contamination at the Site.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 628:** Deny.

16 **REQUEST FOR ADMISSION NO. 629.** Wells that are hydrogeologically
17 downgradient from the Muscoy Reservoir have tested positive for TCE.

18 **RESPONSE TO REQUEST FOR ADMISSION NO. 629:** Deny.

19 **REQUEST FOR ADMISSION NO. 630.** Wells that are hydrogeologically
20 downgradient from the Muscoy Reservoir have tested positive for PCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 630:** Deny.

22 **REQUEST FOR ADMISSION NO. 631.** Water, which was contaminated with TCE
23 and PCE from the interior coating in the Muscoy Reservoir, drained from the Muscoy Reservoir
24 and contributed to the TCE groundwater contamination at the Site.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 631:** After diligent search and
26 reasonable inquiry, the City lacks sufficient information about the Muscoy Reservoir, which is
27 owned and operated by a company with no organizational relationship to the City, to admit or
28 deny this Request.

United States Summary
Judgment Motion,
Ex. 626, Page 768

1 **REQUEST FOR ADMISSION NO. 632.** Water, which was contaminated with TCE
2 and PCE from the interior coating in the Muscoy Reservoir, drained from the Muscoy Reservoir
3 and contributed to the PCE groundwater contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 632:** After diligent search and
5 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
6 Reservoir, which is owned and operated by a company with no organizational relationship to the
7 City, to admit or deny this Request.

8 **REQUEST FOR ADMISSION NO. 633.** Water from the Muscoy Reservoir which
9 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
10 underground distribution lines in the Zone fed by the reservoir and contributed to the TCE
11 contamination at the Site.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 633:** Object because the Request is
13 vague and ambiguous. Deny as to the City's distribution lines. After diligent search and
14 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
15 Reservoir, which is owned and operated by a company with no organizational relationship to the
16 City, to admit or deny this Request as to the Muscoy Water Company.

17 **REQUEST FOR ADMISSION NO. 634.** Water from the Muscoy Reservoir which
18 was contaminated with TCE and PCE from the interior coating in the reservoir leaked from
19 underground distribution lines in the Zone fed by the reservoir and contributed to the PCE
20 groundwater contamination at the Site.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 634:** Object because the Request is
22 vague and ambiguous. Deny as to the City's distribution lines. After diligent search and
23 reasonable inquiry, the City is unable to locate sufficient information about the Muscoy
24 Reservoir, which is owned and operated by a company with no organizational relationship to the
25 City, to admit or deny this Request as to the Muscoy Water Company.

26 **REQUEST FOR ADMISSION NO. 635.** Prior to 1981, the Southern California Water
27 Company ("SCWC") operated a water distribution system west of 1215 and south of Kern Street.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 635:** Admit.

United States Summary
Judgment Motion,
Ex. 102, Page 769

1 **REQUEST FOR ADMISSION NO. 636.** The SCWC water system included a service
2 area known as "Delmann" system.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 636:** Admit.

4 **REQUEST FOR ADMISSION NO. 637.** The SCWC water system was connected to
5 the City's water system.

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 637:** Admit.

7 **REQUEST FOR ADMISSION NO. 638.** The SCWC water system was connected to
8 the City's water system through a 4" intertie.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 638:** Admit.

10 **REQUEST FOR ADMISSION NO. 639.** The connection between SCWC's water
11 system and the City's water system allowed water from the SCWC system to flow into the City
12 system.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 639:** Deny.

14 **REQUEST FOR ADMISSION NO. 640.** Prior to 1981, water flowed from the SCWC
15 water system to the City water system.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 640:** Deny.

17 **REQUEST FOR ADMISSION NO. 641.** Prior to 1981, the SCWC water system
18 included a water reservoir constructed of steel ("SCWC Reservoir").

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 641:** Admit.

20 **REQUEST FOR ADMISSION NO. 642.** Prior to 1981, there were water losses in the
21 distribution Zone fed by the SCWC Reservoir due to leaks in underground distribution lines.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 42:** Deny.

23 **REQUEST FOR ADMISSION NO. 643.** Prior to 1981, a cold-applied coal tar coating
24 was used to line the interior of the SCWC Reservoir.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 643:** After diligent search and
26 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
27 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
28 relationship to the City, to admit or deny this Request.

United States Summary
Judgment Motion,
Ex. 627, Page 770

1 **REQUEST FOR ADMISSION NO. 644.** Prior to 1981, the materials applied to the
2 interior of the SCWC Reservoir contained TCE.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 644:** After diligent search and
4 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
5 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
6 relationship to the City, to admit or deny this Request.

7 **REQUEST FOR ADMISSION NO. 645.** Prior to 1981, the materials applied to the
8 interior of the SCWC Reservoir contained PCE.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 645:** After diligent search and
10 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
11 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
12 relationship to the City, to admit or deny this Request.

13 **REQUEST FOR ADMISSION NO. 646.** After applying the coating to the interior
14 surface, the SCWC Reservoir was disinfected and water was drained water from it.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 646:** After diligent search and
16 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
17 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
18 relationship to the City, to admit or deny this Request.

19 **REQUEST FOR ADMISSION NO. 647.** Water drained from the SCWC Reservoir
20 contained TCE.

21 **RESPONSE TO REQUEST FOR ADMISSION NO. 647:** After diligent search and
22 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
23 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
24 relationship to the City, to admit or deny this Request.

25 **REQUEST FOR ADMISSION NO. 648.** Water drained from the SCWC Reservoir
26 contained PCE.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 648:** After diligent search and
28 reasonable inquiry, the City is unable to locate sufficient information about the SCWC

1 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
2 relationship to the City, to admit or deny this Request.

3 **REQUEST FOR ADMISSION NO. 649.** TCE contaminated water from the SCWC
4 Reservoir was drained onto the ground.

5 **RESPONSE TO REQUEST FOR ADMISSION NO. 649:** After diligent search and
6 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
7 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
8 relationship to the City, to admit or deny this Request.

9 **REQUEST FOR ADMISSION NO. 650.** PCE contaminated water from the SCWC
10 Reservoir was drained onto the ground.

11 **RESPONSE TO REQUEST FOR ADMISSION NO. 650:** After diligent search and
12 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
13 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
14 relationship to the City, to admit or deny this Request.

15 **REQUEST FOR ADMISSION NO. 651.** The TCE contaminated water from the
16 SCWC Reservoir was drained into the sanitary sewer system.

17 **RESPONSE TO REQUEST FOR ADMISSION NO. 651:** After diligent search and
18 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
19 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
20 relationship to the City, to admit or deny this Request.

21 **REQUEST FOR ADMISSION NO. 652.** The PCE contaminated water from the
22 SCWC Reservoir was drained into the sanitary sewer system.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 652:** After diligent search and
24 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
25 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
26 relationship to the City, to admit or deny this Request.

27 **REQUEST FOR ADMISSION NO. 653.** The TCE contaminated water from the
28 SCWC Reservoir was drained into the storm sewer system.

United States Summary
Judgment Motion,
Ex. 662, Page 172

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 653:** After diligent search and
2 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
3 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
4 relationship to the City, to admit or deny this Request.

5 **REQUEST FOR ADMISSION NO. 654.** The PCE contaminated water from the
6 SCWC Reservoir was drained into the storm sewer system.

7 **RESPONSE TO REQUEST FOR ADMISSION NO. 654:** After diligent search and
8 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
9 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
10 relationship to the City, to admit or deny this Request.

11 **REQUEST FOR ADMISSION NO. 655.** Prior to 1981, the SCWC Reservoir was
12 located hydrogeologically upgradient from the groundwater contamination at the Site.

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 655:** Deny.

14 **REQUEST FOR ADMISSION NO. 656.** Wells that are hydrogeologically
15 downgradient from the SCWC Reservoir have tested positive for TCE.

16 **RESPONSE TO REQUEST FOR ADMISSION NO. 656:** Deny.

17 **REQUEST FOR ADMISSION NO. 657.** Wells that are hydrogeologically
18 downgradient from the SCWC Reservoir have tested positive for PCE.

19 **RESPONSE TO REQUEST FOR ADMISSION NO. 657:** Deny.

20 **REQUEST FOR ADMISSION NO. 658.** Water, which was contaminated with TCE
21 and PCE from the interior coating in the SCWC Reservoir, drained from the SCWC Reservoir
22 and contributed to the TCE groundwater contamination at the Site.

23 **RESPONSE TO REQUEST FOR ADMISSION NO. 658:** After diligent search and
24 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
25 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
26 relationship to the City, to admit or deny this Request.

27
28
United States Summary
Judgment Motion,
Ex. 62, Page 773

1 **REQUEST FOR ADMISSION NO. 659.** Water, which was contaminated with TCE
2 and PCE from the interior coating in the SCWC Reservoir, drained from the SCWC Reservoir
3 and contributed to the PCE groundwater contamination at the Site.

4 **RESPONSE TO REQUEST FOR ADMISSION NO. 659:** After diligent search and
5 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
6 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
7 relationship to the City, to admit or deny this Request.

8 **REQUEST FOR ADMISSION NO. 660.** Water from the SCWC Reservoir which was
9 contaminated with TCE and PCE from the interior coating in the reservoir leaked from
10 underground distribution lines in the Zone fed by the reservoir and contributed to the TCE
11 contamination at the Site.

12 **RESPONSE TO REQUEST FOR ADMISSION NO. 660:** After diligent search and
13 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
14 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
15 relationship to the City, to admit or deny this Request.

16 **REQUEST FOR ADMISSION NO. 661.** Water from the SCWC Reservoir which was
17 contaminated with TCE and PCE from the interior coating in the reservoir leaked from
18 underground distribution lines in the Zone fed by the reservoir and contributed to the PCE
19 groundwater contamination at the Site.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 661:** After diligent search and
21 reasonable inquiry, the City is unable to locate sufficient information about the SCWC
22 Reservoir, which prior to 1981 was owned and operated by a company with no organizational
23 relationship to the City, to admit or deny this Request.

24 **REQUEST FOR ADMISSION NO. 662.** Prior to 1981, laundry and dry-cleaning
25 operations were performed by private businesses in the City.

26 **RESPONSE TO REQUEST FOR ADMISSION NO. 662:** Admit.

27 **REQUEST FOR ADMISSION NO. 663.** Prior to 1981, PCE was used in dry-cleaning
28 operations performed in the City.

United States Summary
Judgment Motion,
Ex. 62, Page 774

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 663:**

2 After diligent search and
3 reasonable inquiry the City is unable to locate sufficient information to enable it to admit or deny
4 this Request. During the time period at issue, there were no reporting programs or requirements
5 in place affecting dry-cleaning operations through which the City would have been made aware
6 of what solvents were used for dry-cleaning operations.

6 **REQUEST FOR ADMISSION NO. 664.** Prior to 1981, in addition to PCE, other

7 solvents were used in dry-cleaning operations conducted in the City.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 664:**

9 After diligent search and
10 reasonable inquiry the City unable to locate sufficient information to enable it to admit or deny
11 this Request. During the time period at issue, there were no reporting programs or requirements
12 in place affecting dry-cleaning operations through which the City would have been made aware
13 of what solvents were used for dry-cleaning operations.

13 **REQUEST FOR ADMISSION NO. 665.** Prior to 1981, wastewater from dry-cleaning

14 operations was discharged into the sanitary sewer system in the City.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 665:**

16 After diligent search and
17 reasonable inquiry the City is unable to locate sufficient information to enable it to admit or deny
18 this Request. During the time period at issue, there were no reporting programs or requirements
19 in place affecting dry-cleaning operations through which the City would have been made aware
20 of what solvents were used for dry-cleaning operations.

20 **REQUEST FOR ADMISSION NO. 666.** Solvents used by dry-cleaning operations

21 were discharged into the sanitary sewer system in the City.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 666:**

23 After diligent search and
24 reasonable inquiry the City is unable to locate sufficient information to enable it to admit or deny
25 this Request. During the time period at issue, there were no reporting programs or requirements
26 in place through which the City would have been made aware of this information.

26 **REQUEST FOR ADMISSION NO. 667.** PCE used by dry-cleaning operations was

27 discharged into the sanitary sewer system in the City.

28
United States Summary
Judgment Motion,
Ex. 62, Page 775

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 667:**

2 After diligent search and
3 reasonable inquiry the City is unable to locate sufficient information to enable it to admit or deny
4 this Request. During the time period at issue, there were no reporting programs or requirements
5 in place through which the City would have been made aware of this information.

6 **REQUEST FOR ADMISSION NO. 668.** Solvents used by dry-cleaning operations
7 were discharged onto the ground.

8 **RESPONSE TO REQUEST FOR ADMISSION NO. 668:**

9 After diligent search and
10 reasonable inquiry the City is unable to locate sufficient information to enable it to admit or deny
11 this Request. During the time period at issue, there were no reporting programs or requirements
12 in place through which the City would have been made aware of this information.

13 **REQUEST FOR ADMISSION NO. 669.** PCE used by dry-cleaning operations was
14 discharged onto the ground.

15 **RESPONSE TO REQUEST FOR ADMISSION NO. 669:**

16 After diligent search and
17 reasonable inquiry the City is unable to locate sufficient information to enable it to admit or deny
18 this Request. During the time period at issue, there were no reporting programs or requirements
19 in place through which the City would have been made aware of this information.

20 **REQUEST FOR ADMISSION NO. 670.** There are two identified plumes of
21 groundwater contamination at the Newmark Site.

22 **RESPONSE TO REQUEST FOR ADMISSION NO. 670:**

Deny.

23 **REQUEST FOR ADMISSION NO. 671.** EPA designated the easterly contaminant
24 plume at the Newmark Site as the "Newmark" plume.

25 **RESPONSE TO REQUEST FOR ADMISSION NO. 671:**

Deny.

26 **REQUEST FOR ADMISSION NO. 672.** EPA designated the westerly contaminant
27 plume at the Newmark Site as the "Muscoy" plume.

28 **RESPONSE TO REQUEST FOR ADMISSION NO. 672:**

Deny.

REQUEST FOR ADMISSION NO. 673. The direction and rate of groundwater flow
within the Newmark and Muscoy plumes are consistent with the contaminants in the plumes

1 having been introduced into the groundwater from the City's release of reservoir water that was
2 contaminated by the materials applied to the interior surfaces of the reservoirs.

3 **RESPONSE TO REQUEST FOR ADMISSION NO. 673:** Deny.

4 **REQUEST FOR ADMISSION NO. 674.** The direction and rate of groundwater flow
5 within the Newmark and Muscoy plumes are consistent with the contaminants in the plumes
6 having been introduced into the groundwater from leaks in the City's distribution system of
7 reservoir water that was contaminated by the materials applied to the interior surfaces of the
8 reservoirs.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 674:** Deny.

10 **REQUEST FOR ADMISSION NO. 675.** The City did not report the contamination of
11 its reservoir water by the interior coating materials to URS when URS was conducting an
12 investigation of other Potentially Responsible Persons ("PRP").

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 675:** Object because the Request is
14 vague, argumentative, and misleading. The City admits it did not report the contamination of its
15 reservoir water caused by the interior coating materials used in its reservoirs to URS because
16 there was no such contamination to report.

17 **REQUEST FOR ADMISSION NO. 676.** The City did not report the contamination of
18 its reservoir water by the interior coating materials to the County of San Bernardino when the
19 County was conducting an investigation of other PRPs.

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 676:** Object because the Request is
21 vague, argumentative, and misleading. The City admits it did not report to the County when the
22 County was conducting an investigation of other PRPs any contamination of the City's reservoir
23 water caused by the interior coating materials used in those reservoirs because there was no such
24 contamination to report.

25 **REQUEST FOR ADMISSION NO. 677.** The City did not report the contamination of
26 its reservoir water by the interior coating materials to the EPA.

27 **RESPONSE TO REQUEST FOR ADMISSION NO. 677:** Object because the Request is
28 vague, argumentative, and misleading. The City admits it did not report to EPA any

1 contamination of its reservoir water caused by the interior coating materials used in its reservoirs
2 to EPA because there was no such contamination to report.

3 **REQUEST FOR ADMISSION NO. 678.** The City did not report the contamination of
4 its reservoir water by the interior coating materials to the State of California Department of
5 Toxic Substance Control ("DTSC").

6 **RESPONSE TO REQUEST FOR ADMISSION NO. 678:** Object because the Request is
7 vague, argumentative, and misleading. The City admits it did not report to DTSC any
8 contamination of its reservoir water caused by the interior coating materials used in its reservoirs
9 because there was no such contamination to report.

10 **REQUEST FOR ADMISSION NO. 679.** The City did not disclose the contamination
11 of its reservoir water by the interior coating materials as part of its initial disclosures under Fed.
12 R. Civ. P. 26(a).

13 **RESPONSE TO REQUEST FOR ADMISSION NO. 679:** Object because the Request is
14 vague and misleading. The City admits that it did not disclose any contamination of its reservoir
15 water by the interior coating materials as part of its initial disclosures under Fed. R. Civ. P. 26(a)
16 because there was no such contamination to report.

17 **REQUEST FOR ADMISSION NO. 680.** The City did not disclose the identification
18 of each individual likely to have discoverable information concerning the contamination of the
19 City's contaminated reservoir water as part of its initial disclosures under Fed. R. Civ. P. 26(a).

20 **RESPONSE TO REQUEST FOR ADMISSION NO. 680:** Object because the Request is
21 vague and misleading, and because of its phrasing, the City is unable directly to admit or deny
22 the Request as formulated. The City does admit that it satisfied its initial disclosure obligations
23 under Fed. R. Civ. P. and identified each individual then known to it likely to have discoverable
24 information concerning potential contamination of its reservoir water due to the coating materials
25 used in those reservoirs.

26 **REQUEST FOR ADMISSION NO. 681.** The City has never reported the
27 contamination of its reservoir water by the interior coating materials to the Court.
28

1 **RESPONSE TO REQUEST FOR ADMISSION NO. 681:**

2 Object because the Request is
3 argumentative and misleading The City admits it did not report any contamination of its
4 reservoir water caused by the interior coating materials used in its reservoirs to the Court because
5 there was no such contamination to report.

6 **REQUEST FOR ADMISSION NO. 682:** The City has never disclosed the

7 contamination of its reservoir water by the interior coating materials to the U.S. Department of
8 Justice.

9 **RESPONSE TO REQUEST FOR ADMISSION NO. 682:**

10 Object because the Request is
11 argumentative and misleading The City admits it did not report any contamination of its
12 reservoir water caused by the interior coating materials used in its reservoirs to the Court because
13 there was no such contamination to report.

14 Dated: June 1, 1999

Respectfully submitted.

15 GRESHAM, SAVAGE, NOLAN & TILDEN, LLP

16 By: 

17 Thomas N. Jacobson

18 PATTON BOGGS LLP

19 By: 

20 Russell V. Randle
21 Mary Beth Bosco
22 Paul A. J. Wilson

23 ATTORNEYS FOR PLAINTIFF.
24 City of San Bernardino.
25 Municipal Water Department
26
27
28

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

VERIFICATION

STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO

I have read the foregoing *Plaintiff City of San Bernardino Municipal Water Department's Response to Defendant's Second Set of Requests for Admission* and know its contents.

☒ CHECK APPLICABLE PARAGRAPH

☐ I am a party to this action. The matters stated in the foregoing document are true of my own knowledge except as to those matters which are stated on information and belief, and as to those matters I believe them to be true.

☒ I am ☐ an officer ☐ a partner ☒ the *Deputy General Manager of The City of San Bernardino Municipal Water Department*, a party to this action, and am authorized to make this verification for and on its behalf, and I make this verification for that reason. ☐ I am informed and believe and on that ground allege that the matters stated in the foregoing document are true. ☐ The matters stated in the foregoing document are true of my own knowledge except as to those matters which are stated on information and belief, and as to those matters I believe them to be true.

☐ I am one of the attorneys for _____, a party to this action. Such party is absent from the county of aforesaid where such attorneys have their offices, and I make this verification for and on behalf of that party for that reason. I am informed and believe and on that ground allege that the matters stated in the foregoing document are true.

Executed on June 1, 1999, at San Bernardino, California.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Stacey Aldstadt
Stacey Aldstadt

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

PROOF OF SERVICE

STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO

RE: CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
vs. UNITED STATES OF AMERICA, et al.

Case No. CV 96-8867 MRP (VAPx) and CV 96-8867 MRP (JGx)

I am employed in the County of San Bernardino, State of California. I am over the age of 18 years and not a party to the within action; my business address is: 600 N. Arrowhead Avenue, Suite 300, San Bernardino, CA 92401.

On June 1, 1999, I served a true copy of the within document described as **PLAINTIFF CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT'S SECOND SET OF REQUESTS FOR ADMISSION** on the interested parties in this action as follows:

SEE ATTACHED SERVICE LIST

- () BY MAIL - I am "readily familiar" with the firm's practice of collection and processing correspondence for mailing. Under that practice, it would be deposited with the United States Postal Service with postage thereon fully prepaid at San Bernardino, California, on the same day in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.
- () BY PERSONAL SERVICE - I caused such envelope to be delivered by hand to the offices of the addressee pursuant to C.C.P. §1011.
- (X) BY EXPRESS MAIL/OVERNIGHT DELIVERY - I caused such envelope to be delivered by hand to the office of the addressee via overnight delivery pursuant to C.C.P. §1013(c), with delivery fees fully prepaid or provided for.
- () BY FACSIMILE - I caused such document to be delivered to the office of the addressee via facsimile machine pursuant to C.C.P. §1013(e). Said document was transmitted to the facsimile number of office of the addressee See Attached List from the office of Gresham, Savage, Nolan & Tilden, LLP in San Bernardino, California, on the date set forth above. The facsimile machine I used complied with California *Rules of Court*, Rule 2003(3) and no error was reported by the machine. Pursuant to California *Rules of Court*, Rule 2009(i), I caused the machine to print a transmission record of the transmission, a copy of which is attached to this declaration.
- (X) FEDERAL - I am employed in the office of a member of the bar of this court at whose direction the service was made.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on June 1, 1999, at San Bernardino, California.


Ann LeMaster

SERVICE LIST

RE: CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
vs UNITED STATES OF AMERICA, et al.

Case No. CV 96-8867 MRP (VAPx) and CV 96-8867 MRP (JGx)

Lisa Russell, Esq.
United States Department of Justice
Environment & Natural Resources Section
P.O. Box 23986
Washington, D.C. 20026-3986

FACSIMILE NO.: 202/514-8865
Telephone No.: (202) 514-1806

Martin F. McDermott
Environmental Defense Section
U.S. Department of Justice
601 D Street N.W., Room 8114.
Washington, DC 20004

FACSIMILE NO.: 202/616-2426
Telephone No.: 202/514-4122

J. Steven Rogers
Environmental Defense Section
U.S. Department of Justice
601 D Street N.W., Suite 8000
Washington, DC 20004

FACSIMILE NO.: 202/514-8865
Telephone No.: 202/514-2219

Ann Rushton, Esq.
Deputy Attorney General
State of California
Department of Justice
Office of the Attorney General
300 South Spring Street, Suite 500
Los Angeles, CA 90013

FACSIMILE NO.: 213/897-2802
Telephone No.: (213) 897-2608

Thomas H. Pacheco, Esq.
Environment and Natural Resources Division
Environmental Defense Section
301 Howard Street, Suite 870
San Francisco, CA 94105

FACSIMILE NO.: 415/744-6476
Telephone No.: 415/744-6480

Mark Rigau
Environmental and Natural Resources Division
Environmental Defense Section
301 Howard Street, Suite 870
San Francisco, CA 94105

FACSIMILE NO.: 415/744-6476
Telephone No.: 415/744-6491

Mark Chalfant
Mail Code ORC - 3
Office of the Regional Counsel
U.S. Environmental Protection Agency
75 Hawthorne Street, Region IX
San Francisco, CA 94105-3901

FACSIMILE NO.: 415/744-1041
Telephone No.: 415/744-1351

Lawyers
GRESHAM, SAVAGE,
NOLAN & TILDEN, LLP
600 No. Arrowhead Ave
Suite 300
San Bernardino, CA 92401
(909) 884-2171

CV 96-8867 MRP (VAPx)

PARTIALLY SCANNED
OVERSIZE ITEM (S)

See Document # 1089/4
for partially scanned image(s).

For complete version of oversize document(s),
see paper copy.

Exhibit 64

Van Water & Rogers

division of Univar

ORIGINAL

DUPLICATE

SERVING SCIENCE, INDUSTRY AND AGRICULTURE • WAREHOUSES IN MAJOR MARKETING AREAS • PERMIT TO NEAREST ADDRESS:

LOS ANGELES
1440 MONTE BEACH PLACE
LOS ANGELES
90051

LAS VEGAS
4650 SOUTH VALLEY VIEW
LAS VEGAS
89122, 736 7066

SAN DIEGO
2100 HAWFLY AVENUE
NATIONAL CITY
92112, 262-0711

• P.O. BOX 20677
LOS ANGELES CA 90051
• P.O. BOX 1391
SAN DIEGO CA 92112

SOLD TO

SHIP TO

INVOICE
DATE

INVOICE
NUMBER

09/30/77

51-70-35

TERMS

NET 10TH PROX

045208
SAN BERNARDINO CITY OF
TER DEPT
BOX 710
BERNARDINO CA

51095219
SAN BERNARDINO CITY OF
WATER RECLAMATION PLANT
299 BLOOD BANK RD
SAN BERNARDINO CA

92402

92403

YOUR ORDER NUMBER	SHIPPING DATE	SHIPPED VIA	F.O.B.	FREIGHT
4200 REQ 86050	09/29/77	AUTO FAST FRT	EXHSE 1A	

ORDERED	SHIPPED	QTY	UNIT	DESCRIPTION	UNIT PRICE	PER	PRICE EXTENS
1.000	1.000	DR	04761406	660.00 LB TRICHLOROETHYLENE NEUTRAL GRADE-VW	.2975	LB	196.1

EXPRESSLY UNDERSTOOD AND AGREED THAT SELLER MAKES NO EXPRESS OR IMPLIED WARRANTIES OF
ESS OR OF MERCHANTABILITY OR OF ANY OTHER KIND WHATSOEVER EXCEPT THAT THE GOODS SOLD
UNDER SHALL BE OF THE QUANTITY ABOVE SPECIFIED. BUYER ASSUMES ALL THE RISK OF LIABILITY
TSOEVER RESULTING FROM THE USE OF SUCH GOODS, WHETHER USED SINGULARLY OR IN COM-
TION WITH OTHER SUBSTANCES. SELLER'S LIABILITY FOR NONCONFORMING GOODS IS EXCLUSIVELY
ED AT THE SELLER'S OPTION, TO REPLACEMENT OF THE DEFECTIVE GOODS OR THE PURCHASE PRICE
UCH GOODS AND UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR INCIDENTAL OR CON-
TENTIAL DAMAGES. THE AMOUNT BILLED IS JUSTLY DUE AND OWING. NO PART THEREOF HAS BEEN PAID.
THE AMOUNT DUE FOR THE LAST ITEM ACCRUED WITHIN ONE YEAR OF THE INVOICE DATE.
E AND LOCAL TAXES HAVE NOT BEEN INCLUDED UNLESS SPECIFICALLY ITEMIZED ON THE INVOICE.
DUE BALANCES ARE SUBJECT TO A LATE PAYMENT CHARGE OF 1% PER MONTH, OR IF LESS, THE
MJM AMOUNT PERMITTED BY APPLICABLE LAW.

MERCHANDISE TOTAL
6.00...% TAX
FREIGHT

106.1
11.1
32.0

PLEASE PAY →

241.1

54200

INVOICE

Telephone
(213) 941-0231

HUNT PROCESS[®] Co., Inc.

No. 13008

P.O. BOX 2111

12767 EAST IMPERIAL HIGHWAY

SANTA FE SPRINGS, CALIFORNIA 90670

SOLD TO M033JI
SAN BERNARDINO WATER DEPT
PO BOX 710
SAN BERNARDINO
CA 92403

SHIPPED TO
SAME
WWTP

VIA

ADMIRAL

☒ TAXABLE☐ RESALE☐ PREPAID☐ COLLECT

Date of Invoice	Est. Order Number	Requisition Number	Date Shipped	Terms	F.O.B.
09/23/77	54056		9/16/77	NET 30 DAYS	
QUANTITY	UNIT MEASURE	DESCRIPTION	CODE	UNIT PRICE	TOTAL
30.00	GALLONS	6/5" S KOPPERS 2000C THINNER	G0178	5.05	151.5
		STATE SALES TAX			9.0
		TOTAL INVOICE			160.5

54056

United States Summary
Judgment Motion, Ex. 65, Page 785

300 No. "D" Street
San Bernardino, Calif. 92403

Date 9/15 1977

6255

Wanted by 9/19 1977

CONSTRUCTION ORDER NO. 2540

NAME OF EQUIPMENT _____ MFG. _____

MODEL _____ SERIAL NUMBER _____ YEAR _____

MATERIAL USED FOR _____

[illegible]

APPROVED Don Nelson

SUPERVISOR Michael J. Fox

P. O. NO. 54556

Issued to ALAN W. DROGESS

Date 11/1/8

P. O. NO.

Issued to.

Date _____

P. O. NO. _____

issued to.

Date

54056

Exhibit 66

WATER DEPARTMENT
CITY OF SAN BERNARDINO

No. W.O. #21307

Date Jan. 7, 1981

CONSTRUCTION ORDER

1. LOCATION OF PROPOSED WORK: SAN BERNARDINO WATER UTILITIES CORP.
(RECOAT MALLORY RESERVOIR)

2. DESCRIPTION OF PROPOSED WORK: This Section of the order covers detailed statement of proposed additions or modification to property including material list:

This Construction Order shall include all Labor, Material, and Equipment Rentals necessary to sandblast, clean, and recoat the interior of the Mallory Steel reservoir. The work is to be done by Water Department forces.

MATERIAL REQUIRED

500 bags of sand
120 gallons of Engard 820
Super T & O Tank Coating
Rental of 15 KW portable generator

3. REMOVALS FROM PROPERTY: This Section of the order covers detailed statement of property to be dismantled and delivered to warehouse or salvage:

NONE

4. ABANDONMENT OF PROPERTY: This Section of the order covers detailed statement of property to be abandoned during progress of construction ordered:

NONE

5. STREET CUTTING DATA: A Street Cut Permit ~~will~~ (will not) be required.

United States Summary
Judgment Motion,
Ex. 166, Page 787

APPROVED:

By

General Manager

Engineering Department

NOTE: All changes to Work, Proposed Property Removals, Abandonment and Street Cutting Data shall be reported on a Construction Change Order.

**SAN BERNARDINO MUNICIPAL
WATER DEPARTMENT**

C.O. 2052

21307

Prior.

Name: San Bernardino Water Utilities Corp.

Address: Mallory Reservoir

Side _____ Street _____
Between _____ And _____ Street _____

Lot _____ Bk. _____ Blk. _____ Tract _____ Map No. _____

Service application approved by: _____ Date 1-7-81

Job Description	code

Job Description	Work Instructions: Sandblast, clean, and recoat the interior of the Mallory Steel Reservoir.
-----------------	--

(Use back of hard copy for sketch and location) Approved by: R. D. Combs

Additional Work Performed, Aband. &/or Recoveries:

Authorized Complete:

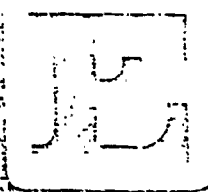
[illegible]

JOE

THIS IS COATING SPEC
FOR WIGGINS HILL.

COST IS \$13.28/gal. W/11.1111
APPROX 200 gals IF ORDERED
50% OF ORDER REDD. 50% ALUM.
PLUS THINNEL

AT THE LOWEST
RITUNASTIC COST 15.26 gal.



J. J. ENGINEERING CORPORATION

ENGARD 820 SUPER T & O TANK COATING

11541 COLLEGE LANE • BELLHOM, CALIFORNIA 92601 • TELEPHONE (714) 331-1111

DESCRIPTION

ENGARD 820 is a unique heavy duty, thixotropic coating based on a special high molecular weight bituminous derivative polymer designed to replace the previous standard coal tar and asphaltic type products. It is formulated to conform and meet the requirements of the United States Food & Drug Administration and other applicable regulatory agencies as a protective lining in contact with food and drinking water. ENGARD 820 may be applied to a dry film thickness of up to 10 mils per coat. It features exceptional ease of application, superior edge covering without sagging, pinholing or mud-cracking. This coating dries by solvent evaporation and is easy to recoat or repair. ENGARD 820 is self-priming on most surfaces or it may be used in combination with primers such as ENGARD 101 and 422 for shop prime projects.

USAGE

ENGARD 820 may be considered as a low cost protective lining for concrete and steel storage tanks, piping and processing equipment handling fresh or industrial water. It is suggested for potable water reservoirs and transmission pipelines, food processing facilities, irrigation systems, fire protection tanks, air conditioning equipment, pulp and paper plants, mining and chemical industries. The principal use for ENGARD 820 is in problem areas which require greater film thickness for protection at an economical cost.

SERVICE LIMITATIONS

Temperature resistance up to 250°F dry and 120°F wet. For immersion service and exposure to corrosive chemicals or use with cathodic protection systems contact ENGARD for specific recommendations and instructions before proceeding. Not recommended as a lining continuously in contact with strong solvents, acids, or bases.

DATA SUMMARY

COLORS	Black, Red and Aluminum
FINISH	Low Gloss
VOLUME SOLIDS*	63%
WEIGHT SOLIDS*	78%
APPLICATION METHODS	Airless or conventional spray. Brush (small areas)
DRY TIME @ 70°F	Recoat - 12 Hours Final Cure - 15 Days
COVERAGE*	Dry film spreading rate per gallon:
Theoretical (No loss)	1008 sq. ft. @ 1 mil 126 sq. ft. @ 8 mils
Practical (20% loss)	806 sq. ft. @ 1 mil 101 sq. ft. @ 8 mils
CONFORMS TO	Rule 442 S.C.A.P.C.D.
CONFORMS TO	U.S.F.D.A.
COMPONENTS	One
MIXING RATIO	Not Applicable
POT LIFE @ 70°F	Not Applicable
THINNER	ENGARD 78
THINNER RATIO	Thin only if required for proper application
SHELF LIFE @ 70°F	Six months from shipment date
FLASH POINT	56°F. (Pensky)

*Solids content may vary according to color selection. When ordering or computing working coverage, allow for application loss and surface irregularities. Multiple coats may be necessary to achieve the desired film thickness due to variations in design configuration, application equipment, temperature and other factors.

SUGGESTED SURFACE PREPARATION

No more surface preparation than can be coated in the same working day should be done. Round off all sharp edges and rough welds. All burrs, weld spatter, loose concrete, masonry and wood should be completely removed. Concrete and masonry should cure at least thirty (30) days and have a moisture content prior to coating below 8% as measured by an instrument such as a Delmhorst Model DP. Wood and composition materials should have a moisture content prior to coating below 15% as measured by an instrument such as a Delmhorst Model BD-7. Oil, grease and heavy deposits of surface contaminants should be removed by solvent or detergent cleaning. All surfaces must be clean, dry and free of any dirt, dust, chalk, grease, oils, salts, curing compounds, release agents, preservatives, and other deleterious materials before application is performed.

CARBON STEEL: It is recommended for immersion or severe exposures that metal surfaces be prepared in accordance with SSPC-SP-10 (Near-White Blast Cleaning). For atmospheric or mild exposures metal surfaces may be prepared in accordance with SSPC-SP-6 (Commercial Blast Cleaning). Prepared metal surfaces should have an anchor profile of not less than two mils (.002) as measured by use of a non-destructive instrument such as a Keane-Tator Surface Profile Comparator.

ALLOY STEELS AND NON-FERROUS METALS: Chemically clean surfaces in accordance with SSPC-SP-1 (Solvent Cleaning). "Brush-off" blast and treat with 10% phosphoric acid to provide a lightly profiled and etched surface. PROTECTIVE CLOTHING AND EQUIPMENT SHOULD BE USED WHENEVER WORKING WITH ACIDS. Apply ENGARD 135 Pretreatment Primer to dry film thickness of not more than one-half mil (.0005). NOTE: Coatings applied to these surfaces may not achieve the same degree of adhesion and toughness.

CONCRETE OR MASONRY: Clean surface by abrasive "Brush-off" blast or etch with 10% hydrochloric acid. If etching is employed, the acid solution should be applied at a spreading rate of 1½ pints per square yard to obtain total wetting of the substrate, and thoroughly worked into the surface by stiff bristled brushes until the bubbling reaction has subsided. PROTECTIVE CLOTHING AND EQUIPMENT SHOULD BE USED WHENEVER WORKING WITH ACIDS. The etched surface should then be thoroughly washed and scrubbed with clean water and stiff bristled brushes or high pressure water hosing to remove all salts and loose particles. Surface and substrate must be thoroughly dry before proceeding with any coating application. Repair and trowel smooth all cavities and voids with ENGARD 490 Epoxy Putty. Clean silica may be added to ENGARD 490 to fill large cavities and voids. Apply ENGARD 422 Permanent Primer to completely wet the surface.

WOOD AND COMPOSITION MATERIALS: Uniformly abrade the surface and feather any irregular edges by hand or power sanding or "brush" blasting under low pressure. The surface must be roughened sufficiently to provide a profile adequate to insure a bond. Apply ENGARD 422 Permanent Primer to completely wet the surface.

BLEEDING SURFACES: Chemically clean the surface, then apply ENGARD 160 Barrier Coat to a dry film thickness of 2 mils (.002). NOTE: Coatings applied to these surfaces may not achieve the same degree of adhesion and toughness.

PREVIOUSLY COATED SURFACES, PLASTICS AND MISCELLANEOUS MATERIALS: Contact ENGARD for specific recommendations and instructions before proceeding. NOTE: Coatings applied to these surfaces may require a special tie or barrier primer. Always check compatibility before application over a previously coated area.

WELDING: Welding should precede coating. In the event welding or flame cutting is performed on metal already coated with this product, do so in accordance with the latest instructions in U.S.A. Standard Z 49.1 "Safety in Welding and Cutting". All welded, burned or otherwise damaged areas should be cleaned to base metal, prepared and recoated as specified.

NOTE: Different ENGARD coatings and/or surface preparation procedures may also be completely satisfactory for use with this product. If for any reason additional information, instruction or explanations are needed, refer to the appropriate supplemental technical bulletins and manuals or contact ENGARD before proceeding.

SUGGESTED APPLICATION PROCEDURE

1. Flush all equipment clean with ENGARD 78 Thinner.
2. Power stir thoroughly until completely mixed and continue agitation during application. EMPTIED CONTAINERS ARE HAZARDOUS BECAUSE THEY RETAIN PRODUCT VAPOR AND RESIDUE.
3. Thin only if required for proper application with ENGARD 78 Thinner.
4. Apply in an even, heavy, wet coat. Give particular attention to all welds, seams, rivets, bolts and other irregularities to insure that they are completely covered.
5. CAUTION! Do not allow material to stand in equipment after use. Clean immediately with ENGARD 78 Thinner. DESTROY CONTAINERS-AFTER USE.

6. Do not apply at temperatures below 40°F or less than 5°F above the dew point.
7. Recoat when material is relatively dry and firm. Curing times are proportionately shorter at higher temperatures or lower film thickness and longer at lower temperatures or higher film thickness. Suggested guide:

Temperature	Thickness	Minimum	Maximum
40°F	8 mils	24 hrs	Not Applicable
70°F	8 mils	12 hrs	Not Applicable
100°F	8 mils	6 hrs	Not Applicable

There are additional factors which can influence the drying rate such as the method of application; the quantity of thinner added, if any; the amount of air circulation and ventilation; humidity, etc. Allow final dry time of at least 15 days at 70°F, before placing in operating service.

8. If it is necessary to spot repair or topcoat with the same product after this material has cured, the following preparation is suggested. Properly clean the areas. The use of ENGARD 7 surface cleaner may be desired. Spot prepare any damaged coating or substrate and feather all rough edges by hand or power sanding or abrasive blasting to remove all deleterious materials before application is performed.
9. If it is necessary to apply this product directly on a zinc rich primer or porous substrate, the use of a thin or "mist" coat prior to the regular application may be desired to reduce the possibility of pinholing and/or blistering.
10. Check for desired dry film thickness. Use a non-destructive instrument such as a Mikrotest on ferromagnetic substrates and a Elcometer "Eddy-Current" Tester on non ferrous metallic substrates. Use an instrument such as a Tooke Gage on non-metallic substrates when a destructive tester is necessary.
11. On surfaces subject to immersion or severe environments, check for pinholes, holidays and bare areas. Use a non-destructive detector such as a Tiner & Rasor M-1 on conductive substrates.
12. If the coating is to be subjected to contact with either food or potable water or to protect the purity of stored products disinfect or decontaminate the fully-cured-coated surface by thoroughly flushing clean with 50 ppm chlorine water solution. All solvent vapors must be completely removed before placing in operating service.
13. All coatings to be applied in accordance with the latest revisions of Steel Structures Painting Council, American Concrete Institute and the Forest Products Research Society surface preparation and application specifications. If for any reason additional information, instructions or explanations are needed, refer to the appropriate supplemental technical bulletins and manuals or contact ENGARD before proceeding.

AIRLESS SPRAY*: Standard equipment such as Graco or equal using a 30:1 or higher pump ratio. Graco 206-718 gun having a fluid tip of .019" to .035" orifice size with reverse-A-clean tip 3/8" I.D. or larger high pressure and solvent resistant fluid line, 1/2" I.D. or larger air supply line. Operating air source capable of providing 80 to 100 psi inbound pressure at the pump.

CONVENTIONAL SPRAY*: Standard equipment such as Binks or equal using a pressure material pot with mechanical agitator, equipped with dual regulators and air gages. Oil and moisture separators are necessary. Binks No. 18 gun, (external mix) 67 fluid nozzle, 67 fluid needle, 67 PB air cap, heavy duty fluid spring. Teflon fluid packing. 1/2" I.D. or larger high solvent resistant fluid line. 3/8" I.D. or larger air supply line. Operating air source capable of providing a minimum of 20 cfm at 80 psi to each nozzle and 60 psi to the pot.

*Regulate pressure as required for proper application. Adjust pressure proportionally higher for the smaller hose diameter and/or the longer hose length and proportionally lower for the larger hose diameter and/or the shorter hose length. Tip angles and orifice diameters should be selected according to application conditions.

BRUSH: Short hair or natural bristle brushes only.

CLOTHING: Protective garments, goggles and filter masks. Barrier creams should be used on any exposed areas of skin.

IN TANKS OR CONFINED AREAS: Explosion proof lights and electrical equipment. Non sparking tools, clothes and shoes. Standard fresh air masks such as MSA or equal with 1/4" I.D. or larger air supply line connected directly to proper air source. Suction type exhaust fans and blowers with sufficient cfm capacity to keep solvent vapors below 20% of the explosive limit. NOTE: Air circulation and exhausting of solvent vapors must be continued until the coatings have fully cured.

NOTE: All equipment and procedures are to conform to the latest safety requirements of applicable regulatory agencies. Different equipment combinations and equivalent equipment from other manufacturers may be completely satisfactory for use with this product. If for any reason additional information, instruction or explanations are needed, refer to the appropriate supplemental technical bulletins and manuals or contact ENGARD before proceeding.

PRODUCT STORAGE

Store in a protected area at 40°F to 100°F. Material should not be used if storage conditions or minimum shelf life period have been exceeded unless found to be satisfactory after reinspection by ENGARD.

WARNING - READ THIS NOTICE !

This ENGARD product is combustible and may cause skin and eye irritation. AVOID PROLONGED CONTACT WITH SKIN AND BREATHING OF VAPOR OR SPRAY MIST. If swallowed do not induce vomiting. CALL PHYSICIAN IMMEDIATELY. In case of skin or eye contact, flood with water immediately and secure medical attention. Keep away from heat and open flame. Close container after each use. USE WITH ADEQUATE VENTILATION. EXPLOSION PROOF EQUIPMENT, FRESH AIR MASKS, EXHAUST FANS AND BLOWERS SHOULD BE USED IN CONFINED AREAS. KEEP OUT OF THE REACH OF CHILDREN. EMPTIED CONTAINERS ARE HAZARDOUS BECAUSE THEY RETAIN PRODUCT VAPOR AND RESIDUES.

ENGARD'S technical advice, recommendations and services are provided without cost and are carefully based on the most accurate and reliable information we have obtained. A technical information, test results, instructions, and suggested recommendations are predicated on storage, application and service performance conditions at an ambient temperature of 70° Fahrenheit unless designated specifically otherwise in writing. Our products have been developed throughout years of experience and laboratory testing. We fully warrant and guarantee the uniformity of our products within ENGARD'S manufacturing tolerance. However, since the use of ENGARD'S products, technical service or recommendations are beyond our direct control, they are furnished only upon the condition that each party shall make his own tests to determine their suitability for a particular purpose and ENGARD disclaims all responsibility for results obtained or damages incurred from their use. Our liability for any damages arising out of negligence or breach of warranty is hereby expressly limited to either supplying free of charge sufficient materials to replace products found to be defective or refund of their purchase price. Failure to give written notice of claim within one year from date of delivery shall constitute a waiver of all claims in respect of such products. There are no other warranties either expressed or implied which are not stated herein. No products, technical advice, recommendations or services are to be considered either alone, or in combination with others, as a suggestion or inducement to use, license to operate under or to infringe on any patents now or hereafter in existence. No modification of the stated terms and conditions shall be of any force or effect by any party specifying, purchasing or utilizing our products, technical advice, recommendations, or services according to different terms and conditions, nor by the mere acknowledgment or acceptance of order or business transaction forms containing different terms and conditions, unless said modifications are agreed to in writing and signed by a duly authorized representative of the party claimed to be bound thereby. All technical information and prices are subject to changes without notice due to increased and development improvements, raw material availability, cost adjustments and other factors. Contact our nearest office for the latest technical and price information. Title to all sales merchandise transfers to buyer at ENGARD'S shipping point. All sales are C.O.D. unless credit terms are properly approved in advance, whereupon full payment is due within 30 days after shipment. In consideration for ENGARD COATING CORPORATION extending credit, all past due accounts shall be subject to a charge of one percent per month (twelve percent per annum) and the total account shall become immediately due and payable if any amount becomes delinquent, and the purchaser shall be liable for all reasonable attorney fees and costs if legal proceedings are initiated for collection. All monies received on account shall always be applied toward payment of that portion of the debt which is the oldest. This notice supersedes all previous publications on these products and subjects.

FOR INDUSTRIAL USE AND PROFESSIONAL APPLICATION ONLY. NOT INTENDED FOR SALE TO THE GENERAL PUBLIC.

Exhibit 67

KOPPERS

Protective Coatings

LIST

919-VLA

Effective
January 15, 1978

Dick Jackson

*Engard
Equal*

Koppers
Card
Number

F.O.B. KAISER, CALIFORNIA

In 55-Gallon Drum	Price per Gallon In 5-Gallon Pail	In 1-Gallon Can	Coverage/ Gal. per coat, sq. ft. Includes 20% loss factor	Thinner (T) and Cleaner (C)
----------------------	---	--------------------	---	-----------------------------------

BITUMINOUS COATINGS

3138	*BITUPLASTIC NO. 28	<i>830</i>	\$3.95	\$4.25	\$4.50	36-45	Water
3141	*BITUPLASTIC NO. 33		4.10	4.40	4.65	36-45	Water
3130	BITUMASTIC NO. 50	<i>850</i>	6.45	6.75	7.00	50-60	T-2000-C
3153	BITUMASTIC 300-M-Black (2 Comp.)	<i>463-464</i>	-	<i>9.45</i> 10.20	10.50	90-115	T-2000-C-2300
3154	BITUMASTIC 300-M-Red (2 Comp.)	<i>463</i>	-	12.70	12.95	90-115	T-2000-C-2300
3133	BITUMASTIC NO. 505	<i>852</i>	6.45	6.75	7.00	50-60	T-2000-C
3134	BITUMASTIC BLACK SOLUTION	<i>806</i>	6.15	6.55	6.80	250-375	T-2000-C
3162	BITUMASTIC HI-HEAT GRAY (2 Comp.)		-	24.95	25.20	270-400	T-4000
3132	BITUMASTIC SUPER SERVICE BLACK	<i>810</i>	5.75	6.05	6.30	60-70	T-2000-C
3136	BITUMASTIC SUPER TANK SOLUTION	<i>800</i>	6.35	6.65	6.90	80-100	T-2000-C
3135	BITUMASTIC TANK SOLUTION	<i>808</i>	6.25	6.55	6.80	250-375	T-2000-C
3179	BITUMASTIC MASONRY PRIMER	<i>802</i>	5.70	6.00	6.25	250-350	T-2000-C
3582	KOPPERS PIPE LINE MASTIC		4.10	4.40	-	185 cu.in.	T-2000-C

CITY 10-0900

United States Summary
Judgment Motion,
Ex. *67* Page *794*

Exhibit 68

Exhibit 69

Exhibit 70

ENGARD[®]

COATINGS CORPORATION

15541 COMMERCE LANE • HUNTINGTON BEACH, CALIFORNIA 92649 • TELEPHONE 714/891-4402

DESCRIPTION

ENGARD 800 Super Tank Coating is a heavy duty, thixotropic coal tar coating which conforms to American Water Works Association D102-78 Inside Paint System No. 6 and United States Environmental Protection Agency's Regulations for use in drinking water. It is formulated utilizing a single special solvent selected for its extremely high EPA SNARL/DOHS Action Level (low toxicity). This provides the user a substantially increased assurance of meeting water quality standards for organic compounds entering the water supply from the applied coating. Further it eliminates the potential syllogistic problem resulting from use and contamination of multiple organic solvents. ENGARD 800 features exceptional ease of application, superior edge covering without sagging, pinholing or mudcracking. It is designed to provide a dry film thickness of up to 10 mils per applied coat. This coating dries by solvent evaporation and is relatively easy to recoat or repair. It is extremely resistant to fresh water and is self-priming on most surfaces or it may be used in combination with primers such as ENGARD 101 Quick Dry Primer for shop prime projects.

USAGE

ENGARD 800 Super Tank Coating may be considered as a protective lining for concrete and steel storage tanks, piping and processing equipment handling fresh or industrial water. It is suggested for water reservoirs and transmission pipelines, irrigation systems, fire protection tanks, air conditioning equipment, pulp and paper industry, mining and chemical plants. The principal use for ENGARD 800 is in water-service systems which require greater film thickness for protection at an economical cost.

800-SU324-1

STANDARD DATA

COLORS	Black
FINISH	Low Gloss
VOLUME SOLIDS	75%
WEIGHT SOLIDS	88%
APPLICATION METHODS	Airless or Conventional Spray, Brush (small areas)
DRY TIME @ 70°F & 50% R.H.	Recoat - 12 Hours Final Cure - 15 Days
COVERAGE	Dry film spreading rate per gallon:
Theoretical (No loss)	1200 sq. ft. @ 1 mil 120 sq. ft. @ 10 mils
Practical (20% loss)	960 sq. ft. @ 1 mil 96 sq. ft. @ 10 mils
CONFORMS TO	Regulations for Air Pollution (VOC 252 g/l) and Drinking Water Toxicity (USEPA)
COMPONENTS	One
MIXING RATIO	Not Applicable
POT LIFE @ 70°F	Not Applicable
THINNER	ENGARD 35
THINNER RATIO	Thin only if required for proper application
SHELF LIFE @ 70°F	Six months from shipment date
DOT/FLASH POINT CLASSIFICATION	Flammable liquid, 20°F to 100°F

CITY 10-1298

United States Summary
Judgment Motion,
Ex. 70, Page 797

SERVICE LIMITATIONS

Temperature resistance up to 200°F dry and 125°F wet depending upon the individual environment. For immersion service and exposure to corrosive chemicals, elevated temperatures or use in contact with food and drinking water or with cathodic protection systems, CONTACT ENGARD FOR SPECIFIC RECOMMENDATIONS AND INSTRUCTIONS BEFORE PROCEEDING. Not recommended as a lining continuously in contact with strong solvents, acids or bases. Not recommended for potable water in small or low turnover storage reservoirs and in dead end or low flow pipelines. Not recommended for prolonged periods of exposure to direct sunlight.

ORDERING AND STORAGE

Gloss variation may occur due to different heat dry/time cure cycles used. When ordering or computing working coverage, allow for application loss and surface irregularities. Multiple coats may be necessary to achieve the desired film thickness due to variations in design configuration, application equipment, temperature and other factors. Store in a protected area between 40°F and 100°F. Material should not be used if storage conditions or minimum shelf life have been exceeded unless found to be satisfactory after reinspection by ENGARD.

SUGGESTED SURFACE PREPARATION

No more surface preparation than can be coated in the same working day should be performed. Round off all sharp edges and rough welds. All burrs, weld spatter, loose concrete, masonry and wood should be completely removed. Concrete and masonry should cure at least thirty (30) days and have a moisture content prior to coating below 8% as measured by an instrument such as a Delmhorst Model DP. Oil, grease and heavy deposits of surface contaminants should be removed by use of ENGARD 9 Solvent Degreaser or ENGARD 7 Surface Cleaner. All surfaces must be clean, dry and free of any dirt, dust, chalk, grease, oils, salts, curing compounds, release agents, preservatives and other deleterious materials before application is performed. **NOTE:** Vacuuming the topside of all horizontal and sloped surfaces is recommended.

CARBON STEEL: It is recommended for immersion or severe exposures that metal surfaces be prepared in accordance with SSPC-SP-10 (Near-White Blast Cleaning). For mild exposures, metal surfaces may be prepared in accordance with SSPC-SP-6 (Commercial Blast Cleaning). Prepared metal surfaces should have an anchor profile of not less than two mils (.002) as measured by use of a non-destructive instrument such as a Keane-Tator Surface Profile Comparator.

ALLOY STEELS AND NON-FERROUS METALS: Chemically clean surfaces in accordance with SSPC-SP-1 (Solvent Cleaning). Abrasive "brush" blast to provide a lightly profiled and etched surface. Apply ENGARD 135 Pretreatment Primer to dry film thickness of not more than one-half mil (.0005) or apply ENGARD 1 Metal Conditioner in accordance to ENGARD'S instructions depending upon the service environment. **NOTE:** Coatings applied to these surfaces may not achieve the same degree of adhesion and toughness.

WELDING: Welding should precede coating. In the event welding or flame cutting is performed on metal already coated with this product, do so in accordance with the latest instructions in U.S.A. Standard Z49:1 "Safety in Welding and Cutting". All welded, burned or otherwise damaged areas should be cleaned to base metal, prepared and recoated as specified.

CITY 10-1299

800-SU324-2

United States Summary
Judgment Motion.
Ex 70 Page 798

CONCRETE AND MASONRY: Clean surface by abrasive "brush-off" blast or etch with 10% hydrochloric acid. If etching is employed, the acid solution should be applied at a spreading rate of 1½ pints per square yard to obtain total wetting of the substrate, and thoroughly worked into the surface by stiff bristled brushes until the bubbling reaction has subsided. **PROTECTIVE CLOTHING AND EQUIPMENT SHOULD BE USED WHENEVER WORKING WITH ACIDS.** The etched surface should then be thoroughly washed and scrubbed with clean water and stiff bristled brushes and/or high pressure water hosing to remove all salts and loose particles. Surface and substrate must be thoroughly dry before proceeding with any coating application. Repair and trowel smooth all cavities and voids with ENGARD 490 Epoxy Putty. Clean silica may be added to ENGARD 490 Epoxy Putty to fill large cavities and voids. Apply the first application coat "thinned" in accordance to ENGARD'S instructions or ENGARD 424 Epoxy Vinyl Primer Sealer to completely wet and thoroughly penetrate the surface.

ZINC PRIMED AND PREVIOUSLY COATED SURFACES, POROUS SUBSTRATES, PLASTICS AND MISCELLANEOUS MATERIALS: Contact ENGARD for specific recommendations and instructions before proceeding. **NOTE:** Coatings applied to these surfaces may require a special tie or barrier primer. Always check compatibility before application over a previously coated area.

NOTE: Different ENGARD coatings and/or surface preparation procedures may also be completely satisfactory for use with this product. If for any reason additional information, instructions or explanations are needed, refer to the appropriate supplemental technical bulletins and manuals or contact-ENGARD before proceeding.

SUGGESTED APPLICATION PROCEDURE

1. Completely read the Product Technical Bulletin and Material Safety Data Sheet before proceeding.
2. Flush all equipment clean with ENGARD 35 Thinner.
3. Power stir thoroughly until completely mixed and continue agitation during application. **EMPTIED CONTAINERS ARE HAZARDOUS BECAUSE THEY RETAIN PRODUCT VAPOR AND RESIDUE.** Properly destroy and dispose of containers after use.
4. Thin only if required for proper application with ENGARD 35 Thinner. Strain only if required for proper application.
5. Apply in an even wet coat. Give particular attention to all welds, seams, rivets, bolts and other irregularities to insure that they are completely covered.
6. **CAUTION!** Do not allow material to stand in equipment after use. Clean immediately with ENGARD 35 Thinner.
7. Application at air and surface temperatures lower than 125°F and above 40°F and more than 5°F above the dew point is suggested. If it is necessary to apply this product at temperatures or humidities beyond these preferred limits contact ENGARD for additional information, instructions and explanations before proceeding.
8. **CAUTION!** Recoat when material is relatively dry and firm. Curing times are proportionately shorter at higher temperatures or lower film thickness and longer at lower temperatures or higher film thickness. Suggested recoat guide:

CITY 10-1300

Temperature	Thickness	Minimum	Maximum
40°F	10 mils	24 hrs	N /A
70°F	10 mils	12 hrs	N /A
100°F	10 mils	6 hrs	N /A

There are additional factors which can influence the drying rate such as: the method of application; the quantity of thinner added, if any; the amount of air circulation and ventilation; humidity, etc. Allow final dry time of at least 15 days at 70°F, before placing in operating service. Heat curing may be used to increase drying speed and resistance properties. If desired, after the final coat has been applied, allow the minimum recoat time before gradually raising the temperature until the substrate reaches 150°F for a period of 2 hours. NOTE: Contact ENGARD for different heat cure time cycles.

9. If it is necessary to spot repair or topcoat with the same product after this material has cured beyond the recommended minimum recoat period, the following preparation is suggested: Properly clean the areas. The use of ENGARD 7 Surface Cleaner may be desired. Spot prepare any damaged coating or substrate and feather the edges by hand or power sanding or abrasive "brush" blasting under low pressure to remove all deleterious materials before application is performed.
10. If it is necessary to apply this product directly on a rough/porous type primer or substrate, the use of a thin or "mist" coat prior to the regular application may be needed to reduce the possibility of pinholing and/or blistering.
11. Check for desired dry film thickness. Use a non-destructive instrument such as a Mikrotest on ferro-magnetic substrates and an Elcometer "Eddy-Current" Tester on non-ferrous metallic substrates. Use an instrument such as a Tooke Gage on non-metallic substrates when a destructive tester is necessary.
12. On surfaces subject to immersion or severe environments, check for pinholes, holidays and bare areas. Use a non-destructive detector such as a Tinker & Razor M-1 on conductive substrates.
13. If the coating is to be subjected to contact with either food or potable water or to protect the purity of stored products, disinfect or decontaminate the fully-cured-coated surface by thoroughly flushing clean with 50 ppm chlorine water solution. Rinse with fresh water and drain to waste. All solvent vapors must be completely removed before placing in operating service.
14. All coatings to be applied in accordance with the latest revisions of American Water Works Association, Steel Structures Painting Council, and American Concrete Institute surface preparation and application specifications. If for any reason additional information, instructions or explanations are needed, refer to the appropriate supplemental technical bulletins and manuals or contact ENGARD before proceeding.

CITY 10-1301

800-5U324-4

United States Summary
Judgment Motion,
Ex. 70, Page 800

SUGGESTED APPLICATION EQUIPMENT

AIRLESS SPRAY*: Standard equipment such as Graco or equal using a 30:1 or higher pump ratio. Graco 206-718 gun having a fluid tip of .021" or larger orifice size with Reverse-A-Clean tip, 3/8" I.D. or larger high pressure and solvent resistant fluid line, 1/2" I.D. or larger air supply line. Operating air source capable of providing 80 to 100 psi inbound pressure at the pump.

CONVENTIONAL SPRAY*: Standard equipment such as Binks or equal using a pressure material pot with mechanical agitator, equipped with dual regulators and air gages. Oil and moisture separators are necessary. Binks No. 18 gun (external mix), 67 fluid nozzle, 65 fluid needle, 67 PB air cap, heavy duty fluid spring and Teflon fluid packing, 1/2" I.D. or larger high solvent resistant fluid line and 3/8" I.D. or larger air supply line. Operating air source capable of providing a minimum of 20 cfm at 80 psi to each nozzle and 60 psi to the pot is required.

*Regulate pressure as required for proper application. Adjust pressure proportionally higher for the smaller hose diameter and/or longer hose length and proportionally lower for the larger hose diameter and/or the shorter hose length. Tip angles and orifice diameters should be selected according to application conditions.

BRUSH: Short hair or natural bristle brushes only.

CLOTHING: Wear protective garments, goggles, and filter masks. Protective barrier creams should be used on any exposed areas of skin.

IN CONFINED AREAS AND TANKS - READ THIS NOTICE! Use explosion proof lighting and electrical equipment, non-sparking tools, clothes and shoes. Ground all structures and equipment. Use procedures which prevent static electrical sparks. Wear properly fitted appropriate NIOSH/MSHA approved fresh air respirator such as MSA or equal with 1/4" I.D. or larger air supply line connected directly to proper air source during and after application unless air monitoring demonstrates vapor/mist levels are within safe limits. Use suction-type exhaust fans and blowers with sufficient cfm capacity to keep solvent vapors below 20% of the explosive limit. **NOTE:** Air circulation and exhausting of solvent vapors should be continued until the coatings have fully cured to insure that no potential for fire, explosion or health hazard remains.

NOTE: All equipment and procedures are to conform to the latest safety requirements of applicable regulatory agencies. Follow equipment manufacturer's directions and instructions on all equipment use. Different equipment combinations and equivalent equipment from other manufacturers may be completely satisfactory for use with this product. If for any reason additional information, instructions or explanations are needed, refer to the appropriate supplemental technical bulletins and manuals or contact ENGARD before proceeding.

CITY 10-1302

HAZARD WARNING - READ THIS NOTICE!

THIS PRODUCT CONTAINS SOLVENT AND AND COAL TAR COMPOUNDS.

WARNING! FLAMMABLE, VAPOR HARMFUL. CAUSES SEVERE EYE AND SKIN BURNS. MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. HARMFUL OR FATAL IF SWALLOWED.

Keep away from heat, sparks and open flame. Use only with adequate ventilation. Prevent breathing of vapor or spray mist. Prevent contact with eyes and skin. Do not take internally. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations. **FIRST AID:** In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. Remove and wash contaminated clothing before reuse. (Discard contaminated shoes). If inhaled, remove to fresh air. If swallowed, **CALL A PHYSICIAN IMMEDIATELY. DO NOT** induce vomiting.

IN CONFINED AREAS AND TANKS OBEY SPECIAL SAFETY AND EQUIPMENT INSTRUCTIONS!

FOR INDUSTRIAL USE BY PROFESSIONAL APPLICATORS ONLY. NOT INTENDED FOR SALE TO THE GENERAL PUBLIC. Not to be sold or delivered to any person under 18 years of age. KEEP OUT OF REACH OF CHILDREN. If for any reason additional product and safety information, instructions or explanations are needed, CONTACT ENGARD IMMEDIATELY!

LIMITED WARRANTY- READ THIS NOTICE!

ENGARD'S technical advice, recommendations and services are provided without charge and are carefully based on the most accurate and reliable information we have obtained. All technical information, test results, instructions and suggested recommendations are predicated on storage, application and service performance conditions at an ambient temperature of 70°F and 50% relative humidity unless designated specifically otherwise in writing. ENGARD fully warrants and guarantees the uniformity of its products within manufacturing tolerance. However, since the use of ENGARD'S products, their application, the regulation of the service environment, their maintenance and routine repair, etc. are factors beyond its direct control, its products are furnished only upon the condition that the customer shall make his own determination of the suitability of ENGARD'S products for his particular purpose, and ENGARD disclaims all responsibility for results obtained or any damages incurred from their use. THEREFORE, IN THE EVENT THAT THERE ARE ANY DAMAGES WHICH ARISE OUT OF ENGARD'S NEGLIGENCE OR BREACH OF WARRANTY, WE WILL SUPPLY, AT ENGARD'S OPTION, EITHER SUFFICIENT MATERIAL FREE OF CHARGE TO REPLACE ANY DEFECTIVE PRODUCTS OR REFUND OF THEIR PURCHASE PRICE FOR A ONE YEAR PERIOD FROM DATE OF PURCHASE. Failure to give written notice of claim within one year from date of delivery shall constitute a waiver of all claims in respect to such products. THERE ARE NO OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED WHICH ARE NOT STATED HEREIN!

CITY 10-1303

800-SU324-6

United States Summary
Judgment Motion,
Ex. 70, Page 802

Exhibit 71

CITY 01-1966

NO. 603
FOR THE FURNISHING AND ERECTION OF A WELDED
STEEL WATER STORAGE TANK FOR THE DEL ROSA
SYSTEM, SAN BERNARDINO MUNICIPAL WATER
DEPARTMENT, CITY OF SAN BERNARDINO.

NOTICE TO BIDDERS

The undersigned invites and will receive bids or proposals for the furnishing and erection of a Welded Steel Water Storage Reservoir, all in accordance with Plans and Specifications on file in the office of the Board of Water Commissioners, 195 "D" Street, San Bernardino, California.

**SPECIFICATIONS NO. 603
FOR THE FURNISHING AND
ERECTION OF A STEEL WATER
STORAGE RESERVOIR FOR THE
DEL ROSA SYSTEM, CITY OF SAN
BERNARDINO.**

Bids to be opened at 9:30 o'clock A.M., August 19, 1953, at the office of the Board of Water Commissioners, 195 "D" Street, San Bernardino, California.

Pursuant to Section 1770 of the Labor Code of the State of California, the City of San Bernardino has ascertained by its Resolution No. 2493, a general prevailing rate of per diem wages for each craft or type of workman needed to execute the contract which will be awarded the successful bidder.

Each bid or proposal must be accompanied by a certified check for an amount of not less than ten per cent (10%) of the aggregate of the proposal, payable to the City of San Bernardino, or by a bond for a like amount, and so payable signed by the bidder and a surety Company, or signed by the bidder and two sureties, which two sureties shall justify before any officer competent to administer an oath in double said amount, over and above all statutory exemptions.

The Board of Water Commissioners reserve the right to reject any or all bids should they deem it for the public good.

**BOARD OF WATER
COMMISSIONERS
JACK T. FELTON, City Clerk
and Ex-Officio Secretary.
BY: HERBERT B. WESSEL,
Deputy.**

(SEAL)

CITY 01-1967

OFFICE COPY

PLANS AND SPECIFICATIONS

NO. 603

FOR THE FURNISHING AND ERECTION OF A WELDED
STEEL WATER STORAGE TANK FOR THE DEL ROSA SYSTEM

JULY, 1953

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California.

CITY 01-1968

United States Summary
Judgment Motion,
Ex. 71, Page 805

SECTION 9

GENERAL REQUIREMENTS

(a) DESCRIPTION:

The Contractor shall furnish and erect ONE Welded Steel Water Storage Tank in accordance with the Plans and Specifications. The Tank shall be manufactured in accordance with A. W. W. A. Specifications No. D 100-52. The inside diameter shall be 48 feet and the shell height shall be 36 feet, and shall be equipped with a cone roof.

Appurtenances shall consist of One outside ladder and cage, not galvanized and One inside ladder which shall be galvanized. Both ladders shall conform with the Safety Code of the State of California. There shall be installed in the shell at the top, as shown on the Plans, 20 - 6" X 18" screened vents at 7'- 6 $\frac{1}{2}$ " inch centers, together with One 6.0' diameter center roof vent, One 8" overflow and entrance weir with pipe inside of reservoir to within one foot of the bottom connected to an 8" flanged outlet, One 16" flanged outlet, One 8" flanged bottom drain, One metal Water Level Gauge complete with float, type Varec 67A or equal, One 24" shell manhole, One 2' X 3' roof hatch equipped with hinges and hasp, One 8" X 50' Steel Curb Ring for foundation.

The upper rim of the Tank shall be reinforced if necessary to support equally spaced radius rods equipped with turnbuckles for earthquake protection. The number and size of the rods shall be determined by the manufacturer so as to give full protection from earthquake stresses.

(b) EXCAVATION:

The City of San Bernardino shall excavate all materials for the Tank site and prepare the base by using rock or sand as recommended by the successful bidder. The grade band shall be furnished 30 days prior to the delivery of the Tank.

(c) PROTECTIVE COATING:

Coating and Painting shall be in accordance with A. W. W. A. Specifications No. D 102-52. Prior to protective coating all exterior and interior surfaces of the Tank, pipe and pipe connections, excluding galvanized ladder shall be sand blasted to remove all loose mill scale.

The exterior and interior bottom, inside shell and all pipe and fittings inside of the Tank except the galvanized ladder shall be coated with coal tar primer and coal tar enamel 3/32 of an inch in thickness, in accordance with A. W. W. A. Specifications. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive two coats of odorless and tasteless coal tar solution. The exterior shell and roof shall be coated with One coat of Red Lead Primer and Two coats of Aluminum Paint.

CITY 01-2000

Exhibit 72

CITY 01-1793

NO. 616
FOR THE FURNISHING AND ERECTION OF A
WELDED STEEL WATER STORAGE TANK FOR THE
QUAIL CANYON SYSTEM, CITY OF SAN BERNARDINO

NO. 616

FOR THE FURNISHING AND ERECTION OF A UNITED
STEEL WATER STORAGE TANK FOR THE QUAIL CANYON SYSTEM
CITY OF SAN BERNARDINO

JUNE, 1954

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California.

CITY 01-1794

United States Summary
Judgment Motion,
Ex. 72, Page 809

(c) PROTECTIVE COATING:

Coating and Painting shall be in accordance with A. W. V. A. Specifications No. D 102-52. Prior to protective coating all exterior and interior surfaces of the Tank, pipe and pipe connections, including galvanized ladder shall be sand blasted to remove all loose mill scale.

The exterior and interior bottom, inside shell and all pipe and fittings inside of the Tank except the galvanized ladder shall be coated with coal tar primer and coal tar enamel 5/51 of an inch in thickness, in accordance with A. W. V. A. Specifications. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive two coats of odorless and tasteless coal tar solution. The exterior shell and roof shall be coated with One coat of Red Lead Primer and Two coats of Aluminum Paint.

NO. 625

FOR THE FURNISHING AND ERECTION OF A WELD-
ED STEEL DOMESTIC WATER STORAGE RESERVOIR
FOR THE TERRACE SYSTEM, CITY OF SAN BER-
NARDINO MUNICIPAL WATER DEPARTMENT.

CITY 01-1670

United States Summary
Judgment Motion,
Ex. 73, Page 811

PLANS AND SPECIFICATIONS

NO. 625

FOR THE FURNISHING AND ERECTION OF A WELDED
STEEL DOMESTIC WATER STORAGE RESERVOIR FOR THE
TERRACE SYSTEM, CITY OF SAN BERNARDINO.

MAY, 1955

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California.

CITY 01-1671

(c) PROTECTIVE COATING:

Coating and Painting shall be in accordance with A. W. W. A. Specifications No. D 102-52. Prior to protective coating all exterior and interior surfaces of the Tank, except the outside bottom and galvanized ladder shall be sand blasted to remove all loose mill scale.

The interior bottom and inside shell shall be coated with coal tar primer and coal tar enamel 3/32 of an inch in thickness, in accordance with A. W. W. A. Specifications. The galvanized ladder shall not be coated. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive two coats of odorless and tasteless coal tar solution. The exterior shell and roof shall be coated with One coat of Red Lead Primer and Two coats of enamel. (Color to be selected by the Superintendent.) The exterior bottom shall not be painted.

A lump sum bid is requested under these Specifications with an alternate bid to include sand blasting and painting of the exterior bottom with coal tar primer and coal tar enamel 3/32 of an inch in thickness, in accordance with A. W. W. A. Specifications.

Exhibit 73

/

Exhibit 74

NO. 636

FOR THE FURNISHING AND ERECTION OF AN
ELEVATED STEEL WATER STORAGE RESERVOIR
WHICH IS DESIGNATED AS TERRACE RESERVOIR
NO. 3, CITY OF SAN BERNARDINO.

CITY 01-1435

United States Summary
Judgment Motion,
Ex. 74 Page 874

PLANS AND SPECIFICATIONS

NO. 636

FOR THE FURNISHING AND ERECTION OF AN E. FLAT. STEEL TANK
STORAGE RESERVOIR WHICH IS DESIGNATED AS TOWER RESERVOIR NO. 1
CITY OF SAN BERNARDINO

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California

CITY 01-1436

NOTICE TO BIDDERS

Notice is hereby given that the undersigned will receive bids or proposals for the Furnishing, Fabrication and Erection of an Elevated Steel Domestic Water Storage Reservoir, designated as the Terrace Reservoir No. 3, City of San Bernardino, California all in accordance with Plans and Specifications No. 636 on file in the Office of the Board of Water Commissioners, 195 "D" Street, San Bernardino, California.

Copies of the Plans and Specifications may be obtained upon request at the Office of the Water Department, 195 "D" Street, San Bernardino, California.

Each bid or proposal shall include drawings or a list of materials and items they propose to furnish.

Bids to be opened at 4:00 o'clock P. M. October 22, 1956, in the Office of the Board of Water Commissioners, 195 "D" Street, San Bernardino, California.

Pursuant to Section 1770 of the Labor Code of the State of California, the City of San Bernardino has ascertained by its Resolution No. 2080, a general prevailing rate of per diem wages for each craft or type of workman needed to execute the contract which will be awarded the successful bidder.

Each bid or proposal must be accompanied by a certified check for an amount of not less than ten per cent (10%) of the aggregate of the proposal, payable to the City of San Bernardino, or by a bond for a like amount, and so payable signed by the bidder and a surety Company or signed by the bidder and two sureties, and which two sureties shall justify before any officer competent to administer an oath in double said amount, over and above all statutory exemptions. All bonds shall be in accordance with Ordinance No. 1535, and the Company issuing said bonds shall have a rating in Best's Guide of "A" or higher.

The Board of Water Commissioners reserves the right to reject any or all bids should they deem it for the public good.

BOARD OF WATER COMMISSIONERS

JACK T. FELTON, City Clerk
and Ex-Officio Secretary

(SEAL)

CITY 01-1437

(g) There shall be provided a safety cage over the fixed ladder from the balcony to a point 10 feet above ground surface all in accordance with the Safety Code of the State of California.

(h) There shall be furnished and installed one (1) 3/4" galvanized conduit line from ground surface to the 24" diameter roof hatch. A 3/4" Electrical Junction box shall be provided at the balcony. Location to be determined by the Superintendent.

DRAWINGS:

The successful bidder shall furnish detailed drawings covering the construction of the tank and tower, and of the foundations.

CLEANING AND PAINTING:

Cleaning and painting shall be in full accordance with the A. S. N. A. Specifications and the latest revisions thereof.

(a) Shop or Field Cleaning: All millscale and rust shall be completely removed from all surfaces of steel members by either sand blasting, grip blasting or pickling, phosphoric acid type.

(b) Shop or Field Painting: After the material has been cleaned and de-scaled the following protective coats shall be applied:

1. All exterior surfaces including the riser and accessories shall receive one (1) coat of red lead primer and two (2) full coats of high grade industrial enamel paint (color to be selected by the Superintendent.

2. The interior surfaces below the maximum water level shall receive one (1) coat of coal tar primer followed by one (1) coat of hot applied coal tar enamel.

3. The interior surfaces above the maximum water level shall receive two (2) coats of cold applied tasteless and odorless coal tar base paint as approved by the Superintendent.

4. After application of the hot coal tar enamel, spark tests shall be made to detect any holidays or hallows.

Exhibit 75

NO. 642

FOR THE FURNISHING AND ERECTION OF A WELDED STEEL WATER STORAGE TANK FOR THE DEL ROSA SYSTEM AND DESIGNATED AS DEL ROSA RESERVOIR NO. 2, CITY OF SAN BERNARDINO.

CITY 01-2766

United States Summary
Judgment Motion,
Ex. 75, Page 818

PLANS AND SPECIFICATIONS

NO. 642

FOR THE FURNISHING AND ERECTION OF A WELDED
STEEL WATER STORAGE TANK FOR THE DEL ROSA SYSTEM
AND DESIGNATED AS DEL ROSA RESERVOIR NO. 2

MARCH, 1957 ,

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California

CITY 01-2767

(c) PROTECTIVE COATING:

Coating and Painting shall be in accordance with A. W. W. A. Specifications No. D 102-52. Prior to protective coating all exterior and interior surfaces of the Tank, except the outside bottom and galvanized ladder shall be sand blasted to remove all loose mill scale.

The interior bottom and inside shell shall be coated with coal tar primer and coal tar enamel 3/32 of an inch in thickness, in accordance with A. W. W. A. Specifications. The galvanized ladder shall not be coated. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive two coats of odorless and tasteless coal tar solution. The exterior shell and roof shall be coated with One coat of Red Lead Primer and Two coats of enamel. (Color to be selected by the Superintendent.) The exterior bottom shall not be painted.

~~A firm bid is requested under these Specifications. An alternate bid to include sand blasting of the exterior bottom with coal tar primer and coal tar enamel 3/32 of an inch in thickness, in accordance with A. W. W. A. Specifications.~~

CITY 01-2798

Exhibit 76

∫

NO. 641

FOR THE FURNISHING & ERECTION OF A WELDED
STEEL WATER STORAGE TANK DESIGNATED AS
QUAIL CANYON NO. 2, TOGETHER W/ADDITIONS
TO THE EXISTING QUAIL CANYON STORAGE TANK
NO. 1, CITY OF SAN BERNARDINO.

CITY 01-2800

PLANS AND SPECIFICATIONS

NO. 641

OFFICE COPY

FOR THE FURNISHING AND ERECTION OF A WELDED STEEL
WATER STORAGE TANK DESIGNATED AS QUAIL CANYON NO. 2, TOGETHER
WITH ADDITIONS TO THE EXISTING QUAIL CANYON STORAGE TANK NO. 1
CITY OF SAN BERNARDINO

APRIL, 1957

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California.

CITY 01-2801

United States Summary
Judgment Motion,
Ex 76, Page 822

NOTICE TO BIDDERS

Notice is hereby given that the undersigned will receive Bids or Proposals for the Furnishing, Fabrication and Erection of a Welded Steel Water Storage Tank designated as Quail Canyon No. 2, together with additions to the existing Quail Canyon Storage Tank No. 1, City of San Bernardino, California all in accordance with Plans and Specifications No. 641 on file in the Office of the Board of Water Commissioners, 195 "D" Street, San Bernardino, California.

Copies of the Plans and Specifications may be obtained upon request at the Office of the Water Department, 195 "D" Street, San Bernardino, California.

Bids to be opened at 4:00 o'clock P. M., April 22, 1957 in the Office of the Board of Water Commissioners, 195 "D" Street, San Bernardino, California.

Pursuant to Section 1770 of the Labor Code of the State of California, the City of San Bernardino has ascertained by its Resolution No. 2880, a general prevailing rate of per diem wages for each craft or type of workman needed to execute the contract which will be awarded the successful bidder.

Each bid or proposal must be accompanied by a certified check for an amount of not less than ten per cent (10%) of the aggregate of the proposal, payable to the City of San Bernardino, or by a bond for a like amount, and so payable signed by the bidder and a surety company or signed by the bidder and two sureties, and which two sureties shall justify before any officer competent to administer an oath in double said amount, over and above all statutory exemptions. All bonds shall be in accordance with Ordinance No. 1535, and the Company issuing said bonds shall have a rating in Best's Guide of "A" or higher.

The Board of Water Commissioners reserves the right to reject any or all bids should they deem it for the public good.

BOARD OF WATER COMMISSIONERS

JACK T. FELTON, City Clerk
and Ex-Officio Secretary

BY: HERBERT B. WESSEL, Deputy

(SEAL)

CITY 01-2802

(e) EXCAVATION:

The City of San Bernardino shall excavate all materials for the Tank site and prepare the base by using rock or sand as recommended by the successful bidder. The grade band shall be furnished 15 days prior to the delivery of the Tank.

Stockpiling of materials on the helicopter landing field adjacent to the tank site will not be permitted.

(f) PROTECTIVE COATING: (NEW TANK)

Coating and Painting shall be in accordance with the latest revisions of A. W. W. A. Specifications. Prior to application of the protective coating all exterior and interior surfaces of the Tank, pipe and pipe connections, excluding galvanized ladder shall be sand blasted to remove all loose mill scale.

The interior bottom and the inside shell to high water level shall be coated with coal tar primer and hot coal tar enamel 3/32 of an inch in thickness. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive two coats of odorless and tasteless coal tar solution. The exterior shell and roof shall be coated with one (1) coat of Red Lead Primer and two (2) coats of enamel (color to be selected by the Superintendent). After completion of all other work, the outside enamel coating of both tanks shall be applied at the same time if desired by the successful bidder.

(g) PROTECTIVE COATING (ADDITIONS TO EXISTING TANK):

Coating and painting shall be in accordance with the latest revisions of A. W. W. A. Specifications. Prior to application of the protective coating the exterior and interior surfaces of the addition to the tank shall be sand blasted to remove all loose mill scale.

The inside shell portion of the addition to the existing tank shall be coated with one (1) coat of coal tar primer and hot coal tar enamel. A perfect bond shall be made to the existing coating.

Spark tests shall be made to detect any holidays or hollows. The exterior shell of the additions to the existing tank shall be coated with one (1) coat of Red Lead Primer. The aluminum paint on the existing tank shall be used as a base enamel paint. The entire exterior and roof shall receive two (2) coats of enamel paint to be selected by the Superintendent). After completion of all other work, the outside enamel coating of both shall be applied at the same time, if desired by the successful bidder.

Exhibit 77

NO. 662

FOR THE FURNISHING AND ERECTION OF A
WELDED STEEL DOMESTIC WATER STORAGE RES-
ERVOIR FOR THE SYCAMORE SYSTEM, CITY OF
SAN BERNARDINO.

CITY 01-1266

United States Summary
Judgment Motion,

Ex 77, Page 825

PLANS AND SPECIFICATIONS

OFFICE COPY

NO. 662

FOR THE FURNISHING AND ERECTION OF A WELDED
STEEL DOMESTIC WATER STORAGE RESERVOIR FOR THE
SYCAMORE SYSTEM, CITY OF SAN BERNARDINO.

JANUARY, 1959

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California.

CITY 01-1267

United States Summary
Judgment Motion.
Ex. 77, Page 826

ADDENDUM NO. 1 TO SPECIFICATIONS NO. 662

(a) PROTECTIVE COATING:

Coating and Painting shall be in accordance with A. S. W. A. Specifications No. D 102-55 E. Prior to applying the protective coating all exterior surfaces of the Tank shall be sandblasted to remove all loose mill scale. All interior surfaces shall be sandblasted to a bright metal.

The interior bottom and inside shell shall be coated with coal tar primer and coal tar enamel 2 1/2 or an inch in thickness, in accordance with A. S. W. A. Specifications. The galvanized ladder shall not be coated. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive three (3) coats of odorless and tasteless coal tar solution. Before erection, that portion of the underside of the roof plates which will be directly over the roof rafters shall be sandblasted to bright metal and painted with one (1) coat of coal tar tank solution. The top portion of the roof rafters shall be coated with coal tar primer and coal tar enamel. This application shall be made in the Contractor's shop. The exterior shell and roof shall be coated with one (1) coat of Red Lead Primer and two (2) coats of enamel. (Color to be selected by the Superintendent.) The exterior bottom shall not be painted.

The Coal Tar Primer and each coat of Paint shall be thoroughly dry before applying the next coat. The Contractor shall not apply any paint until authorized to do so by a representative of the Board of Water Commissioners, City of San Bernardino.

Exhibit 78

NO. 672

FOR THE FURNISHING AND ERECTION OF A
WELDED STEEL DOMESTIC WATER STORAGE RES-
ERVOIR FOR THE TERRACE SYSTEM, CITY OF
SAN BERNARDINO.

CITY 01-1172

United States Summary
Judgment Motion,
Ex. 78, Page 828

PLANS AND SPECIFICATIONS

OFFICE COPY

NO. 672

FOR THE FURNISHING AND ERECTION OF A WEIDED
STEEL DOMESTIC WATER STORAGE RESERVOIR FOR THE
TERRACE SYSTEM, CITY OF SAN BERNARDINO.

JANUARY, 1959

CITY 01-1173

San Bernardino Municipal Water Department
195 "D" Street
San Bernardino, California,

United States Summary
Judgment Motion,
Ex. 78, Page 825

(c) PROTECTIVE COATING:

Coating and Painting shall be in accordance with A. W. W. A. Specifications No. D 102-55 T. Prior to applying the protective coating all exterior surfaces of the Tank shall be sand blasted to remove all loose mill scale. All interior surfaces shall be sand blasted to a bright metal.

The interior bottom and inside shell shall be coated with coal tar primer and coal tar enamel 3/32 of an inch in thickness, in accordance with A. W. W. A. Specifications. The galvanized ladder shall not be coated. Spark tests shall be made to detect any holidays or hollows. The underside of the roof to receive three coats of odorless and tasteless coal tar solution. The top portion of the roof rafters shall be coated with coal tar primer and coal tar enamel. This application shall be made in the Contractor's shop. The exterior shell and roof shall be coated with One coat of Red Lead Primer and Two coats of enamel. (Color to be selected by the Superintendent.) The exterior bottom shall not be painted.

The Coal Tar Primer and each coat of Paint shall be thoroughly dry before applying the next coat. The Contractor shall not apply any paint until authorized to do so by a representative of the Board of Water Commissioners, City of San Bernardino.

(d) PAINTING OF EXISTING RESERVOIR:

The Contractor shall clean and apply One Coat of Enamel Paint to match the final coat on the New Reservoir.

CITY 01-1205

Exhibit 79

SPECIFICATIONS NO. 357

FOR THE INTERIOR CLEANING, DESCALING
AND RELINING OF THE DEL ROSA NUMBER TWO
STEEL WATER TANK.

NOVEMBER 1976

CITY 03-2555

United States Summary
Judgment Motion,
Ex. 79, Page 831

OFFICE COPY

SPECIFICATIONS NO. 357

FOR THE INTERIOR CLEANING, DESCALING,
AND RELINING OF THE DEL ROSA NUMBER TWO STEEL
WATER TANK.

NOVEMBER, 1976

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
300 NORTH "D" STREET
SAN BERNARDINO, CALIFORNIA

CITY 03-2556

United States Summary
Judgment Motion, Ex. 77, Page 832

SPECIFICATIONS NO. 857

I N D E X

	<u>PAGE</u>
NOTICE TO BIDDERS	1
BID FORM	2
CONTRACTOR'S FAITHFUL PERFORMANCE BOND	4
BOND FOR LABOR AND MATERIAL	5
CONTRACT AGREEMENT	7
GENERAL CONDITIONS	
1. DEFINITION OF TERMS	10
(A) BOARD OF WATER COMMISSIONERS	10
(B) CITY	10
(C) GENERAL MANAGER	10
(D) BIDDER	10
(E) CONTRACTOR	10
(F) SURETY	11
(G) PROPOSAL FORM	11
(H) PROPOSAL	11
(I) PROPOSAL GUARANTY	11
(J) SPECIFICATIONS	11
(K) CONTRACT	11
(L) CONTRACTORS BONDS	11
(N) THE WORK	12
2. FORM OF PROPOSALS	12
3. LOCAL CONDITIONS	12
4. EXAMINATION OF SITE, CONDITIONS, ETC.	12
5. BIDDERS GUARANTY	12

CITY 03-2558

	<u>PAGE</u>
6. WITHDRAWAL OF PROPOSALS	13
7. PUBLIC OPENING OF PROPOSALS	13
8. REJECTION OF PROPOSALS	13
9. RESPONSIBILITY OF BIDDER	13
10. TIME REQUIRED FOR WORK	13
11. DISCREPANCIES IN PROPOSALS	13
12. ACCEPTANCE OR REJECTION OF PROPOSALS	14
13. AWARD OF CONTRACT	14
14. RETURN OF PROPOSAL GUARANTEES	14
15. CONTRACTORS BONDS	14
16. WORKMEN'S COMPENSATION	15
17. INSURANCE	15
18. EXECUTION OF CONTRACT	15
19. FAILURE TO EXECUTE CONTRACT	15
20. WORK TO BE DONE	15
21. ALTERATIONS	16
22. EXTRA WORK	16
23. FINAL CLEANING UP	16
24. AUTHORITY OF GENERAL MANAGER	17
25. COORDINATION OF SPECIFICATION AND SPECIAL PROVISIONS	17
26. INTERPRETATION OF SPECIFICATIONS	17
27. COOPERATION OF CONTRACTOR	17
28. INSPECTION OF WORK	17
28-A. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK	18
29. FINAL INSPECTION	19
30. LAWS TO BE OBSERVED	19

CITY 03-2559

United States Summary
Judgment Motion,
Ex. 79, Page 834

	<u>PAGE</u>
31. ALIEN LABOR	19
32. PERMITS AND LICENSES	19
33. PATENT RIGHTS	20
34. CARE OF PROPERTY	20
35. RESPONSIBILITY FOR DAMAGE	20
36. CONTRACTOR'S RESPONSIBILITY FOR WORK	20
37. NO PERSONAL LIABILITY	21
38. RESPONSIBILITY OF CITY	21
39. SUBLETTING AND ASSIGNMENT	21
40. PROGRESS OF THE WORK	22
41. WORKMANSHIP AND PROCEDURE	22
42. CHARACTER OF WORKMEN	22
43. TEMPORARY SUSPENSION OF WORK	22
44. TIME OF COMPLETION	22
45. ANNULMENT OF CONTRACT	23

SPECIAL PROVISIONS

I N D E X

	<u>PAGE</u>
1.01 THE REQUIREMENT	25
1.02 LIQUIDATED DAMAGES	25
1.03 . COMPLETION OF WORK AND FINAL PAYMENT	25

REHABILITATION OF TANK

2.01 NOTICE TO PROCEED	26
2.02 REMOVAL OF TANK LINING	26
2.03 PRIMER	26
2.04 COAL TAR COATING	26
2.05 MATERIALS	26
2.06 APPLICATION	26
2.07 WATER DEPARTMENT LABOR	26
2.08 TANK SIZE	26

ADDENDUM NO. 1 TO SPECIFICATIONS NO. 357

ENTITLED "FOR THE INTERIOR CLEANING, DESCALING, AND RELINING OF THE DEL ROSA NUMBER TWO STEEL WATER TANK".

PAGE 25, ADD:

1.04 GUARANTEE

THE TANK INTERIOR LINING SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FOLLOWING THE COMPLETION OF THE WORK.

1.05 WARRANTY INSPECTION

WARRANTY INSPECTION SHALL BE CONDUCTED DURING THE ELEVENTH (11) MONTH FOLLOWING THE COMPLETION OF ALL COATING WORK. THE CONTRACTOR AND MANUFACTURER'S REPRESENTATIVE SHALL BE NOTIFIED OF THE INSPECTION AND ARE EXPECTED TO ATTEND. ALL DEFECTIVE WORK SHALL BE REPAIRED IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS AND TO THE SATISFACTION OF THE OWNER.

REFERENCE PAGE 26.

2.02 REMOVAL OF TANK LINING

THE CONTRACTOR SHALL REMOVE ALL RUST, SCALE, AND EXISTING LINING FROM CEILING, FLOORS, WALLS AND COLUMNS BY SANDBLASTING OR OTHER ACCEPTABLE MEANS TO PRODUCE A NEAR WHITE METAL. THE SANDBLASTING SHALL COMPLY WITH THE LATEST REVISION OF SSPC SURFACE PREPARATION SPECIFICATION NUMBER TEN (10) (SSPC-SP10) NEAR WHITE BLAST CLEANING. UPON ACCEPTABLE COMPLETION OF THE DESCALING PROCESS, THE CONTRACTOR WILL REMOVE ALL DEBRIS, SAND AND OTHER DELETERIOUS MATERIALS TO THE SATISFACTION OF THE ENGINEER.

2.03 PRIMER

THE CONTRACTOR SHALL APPLY ONE COAT OF "JET-SET" PRIMER TO THE BOTTOM EIGHT (8) FEET OF THE WALLS AND FLOOR. APPLICATION SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

2.04 COAL TAR COATINGS

THE CONTRACTOR SHALL APPLY TWO (2) COATS OF KOPPERS BITUMASTIC SUPER TANK SOLUTION TO A TOTAL THICKNESS OF SIXTEEN (16) MILS (8 MILS EACH COAT) TO ALL PORTIONS OF THE ROOF, WALLS, AND COLUMNS ABOVE THE EIGHT (8) FOOT LEVEL OF THE TANK, ALL PER MANUFACTURER'S RECOMMENDATIONS.

THE FLOOR AND BOTTOM EIGHT (8) FEET OF THE WALLS SHALL RECEIVE A 3/32 INCH COATING OF "KOPPERS 70-B" HOT APPLIED COAL TAR ENAMEL AFTER THE PRIMER HAS THOROUGHLY DRIED AND HARDENED (MINIMUM ONE (1) HOUR).

ADDENDUM NO. 2 TO SPECIFICATIONS NUMBER 357

ENTITLED "FOR THE INTERIOR CLEANING, DESCALING, AND RELINING OF THE DEL ROSA NUMBER TWO STEEL WATER TANK".

UPON INSPECTION OF THE SUBJECT TANK, IT HAS BEEN DETERMINED THAT THE FLOOR AND BOTTOM EIGHT (8) FOOT COURSE ARE IN GOOD CONDITION. THEREFORE, THERE WILL BE NO NEED FOR ANY WORK TO BE DONE IN THIS AREA.

ALL BIDDERS ARE INSTRUCTED TO BID THE JOB AS SUCH. ALL SECTIONS OF THE SPECIFICATIONS PERTINENT TO THE ROOF AND WALLS ABOVE THE EIGHT (8) FOOT LEVEL REMAIN APPLICABLE.

A BRUSH COAT OF "SUPERTANK SOLUTION" SHALL BE APPLIED AT THE JOINT OF NEW AND EXISTING LINING (EIGHT (8) FOOT LEVEL) TO THE SATISFACTION OF THE ENGINEER.

DELETE:

2.03 PRIMER

2.04 PARAGRAPH TWO (2) RE: KOPPERS 70-B APPLICATION

Exhibit 80

∫

KOPPERS

Protective Coatings

TECHNICAL DATA SHEET

TYPE OF COATING
COAL TAR

Product: **BITUMASTIC SUPER TANK SOLUTION**

DESCRIPTION: Bitumastic Super Tank Solution is a heavy duty, high build cold applied highly water resistant coal tar base coating. After normal agitation it is ready to apply. It is normally self priming and will produce a dried film thickness of 8 to 10 mils per coat with good film thickness retention on edges. The coating dries by solvent evaporation and is easy to recoat or repair. The dried film will not sag or flow at maximum temperatures encountered in normal atmospheric exposure and it will not crack at -20°F. Bitumastic Super Tank Solution has an unlimited shelf life with a minimum of settling. It is made from pitch derived from suitable tars, selected solvents and mineral fillers affording a highly water-resistant coating.

Available in Type I (EPA Grade) and Type II (EPA acceptance pending).

USE: FOR INDUSTRIAL USE ONLY. NOT INTENDED FOR USE IN THE HOME.

It is designed primarily for the long-term protection of the interior of large steel water storage tanks and the interior of steel water transmission pipelines used for either potable or irrigation water service.

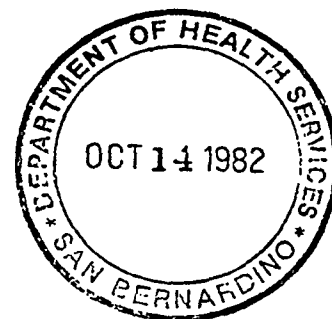
Why not? →

DO NOT USE FOR DEAD END, STAGNANT OR VERY LOW FLOW LINES.

DO NOT INTERMIX OR INTERCOAT TYPES I AND II.

Its required thick coat application deposits 4 to 5 times the thickness of conventional paint.

TECHNICAL DATA:	TYPE I	TYPE II
Number of coats:	2 minimum	2 minimum
Volume solids:	63%	60%
Theoretical coverage, mil sq.ft./gal.:	1010	960
Coverage to achieve minimum dry film thickness, sq.ft./gal./coat (allows for approximately 20% application loss):	80 to 100	75 to 95
Film build ratio:		
Minimum dry film required per coat, mils:	8 to 10	8 to 10
Wet film required per coat, mils:	13 to 16	13 to 17
Drying time at 70°F. and 50% relative humidity:		
To touch, hours:	2	2 to 3



United States Summary,
Judgment Motion,
Ex 80, Page 839

Koppers Company, Inc., Pittsburgh, Pennsylvania 15219

TECHNICAL DATA
(Continued):

Between coats: A minimum of 24 hours, or until first coat dries firm.

Before submerging: The normal dry time is 10 days after the topcoat is applied. Thorough drying must be obtained between coats and after application of the final coat prior to submerging. It is essential that the solvent vapors released during application and from the deposited film be removed from the vessel or tank by means of exhaust blowers or suction fans. Ventilation blowers or fans should be ducted to or from the bottom of the tank.

During coating application, the volume of fresh air introduced must provide good air movement. The volume of fresh air should be not less than 300 cu. ft. air/minute for each one gallon of coating applied/hour. It is customary in large tanks (0.5-2MM gallons) to use a ducted 10,000 c.f.m. blower.

After application, to completely remove all traces of solvent from the coating or tank, forced ventilation at the rate of at least one change of air/hour should be continued for a period of ten days. Temperature and humidity readings above or below 70°F. and 50% R. H. may extend or shorten the time required to some degree.

Before placing in service, the entire coated surfaces shall be washed down with water and disinfectant, and flushed according to AWWA D102-64, Section 5.3.

Color: Type I: Flat Black; Type II: Gloss Black.

Thinner: Koppers Thinner 2000C. Do not use ordinary paint thinners, mineral spirits, gasoline or turpentine as they will destroy the material. Do not thin except in cold weather, when ½ pint of Koppers Thinner 2000C per gallon is the maximum amount allowable.

Cleaner: Koppers Thinner 2000C, to clean brushes, rollers or spray equipment.

Surface preparation: Apply only to clean dry surfaces. Remove weld spatter by chipping or grinding. Grind off all sharp edges or high points on weld seams. Remove oil and grease deposits with Koppers Thinner 2000C. Sandblast metal clean to NACE-3 or SSPC-SP-6.

The maximum height of sandblast profile must not exceed 3 mils.

Surfaces must be coated the same day they are sandblasted.

Primer:

Metal: Normally, self-priming. If a shop primer is required, apply one thinned coat of Bitumastic Super Tank Solution for a minimum dry film thickness of 2.0 mils. The shop primed steel surfaces should not be stored for prolonged periods with exposure to full direct sunlight.

Note: On non-ferrous metals, pretreat with Koppers 40 Passivator.

Mixing instructions: Mix thoroughly until a smooth, uniform texture is obtained. A slow speed power mixer should be used.

TECHNICAL DATA
(Continued):

Methods of application: Brush, roller, conventional or airless spray. Best method of application is spray with airless spray being preferred. Use a technique which will result in a film free of fog or splatter. This will provide a theoretical dry film thickness of 8 to 10 mils when applied at a wet film thickness of 13 to 16 mils for Type I, 13 to 17 mils for Type II.

To insure complete coverage of the welds and in conjunction with the first coat application, the material should be brushed in. Spray over the wet brush coat on the welds.

Airless Spray:

Pump: Graco 30:1 Bulldog or equivalent.

Hose: 3/8" i.d. to 50 Ft.; 1/2" i.d. over 50 Ft.
Use of 1/4" whip end at gun to facilitate handling is recommended.

Gun: Hand gun only; use 30 mesh manifold filter.

Tip sizes: .025" to .035"; 12" fan width is suggested.

Pressure: 50 to 90 psi at pump.

Conventional Spray:

Material pump: Minimum 8:1 ratio.

Hoses: From material pump: 3/8" i.d. to 100 Ft.;
3/4" i.d. over 100 Ft.;
use hoses with solvent resistant linings.

From air line: 1/2" i.d.

Gun: Hand gun; 1/8" tip and 3/16" cap or 1/4" tip and 1/4" cap.

Pressures: Material: 20 to 50 psi.

Atomization: 50 to 80 psi

Individual pressure regulators are required for both material pump and atomizing air.

In cold weather, an in-line heater, such as a Speed-Flo, will facilitate application. Use of an in-line heater is highly recommended whenever airless spray is used.

Do not apply at temperatures below 40°F. or if rain threatens before the coating is dry.

Temperature limitations: Dry: -20°F. to 160°F. Wet: 120°F.

Storage life: 1 year minimum

Packaging: 55-gallon drums, 5-gallon pails and 1-gallon cans

PRECAUTIONS: Take these precautions during application and before the coating dries.

D A N G E R !

HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. SKIN AND EYE IRRITANT. MAY SENSITIZE SKIN TO SUNLIGHT. COMBUSTIBLE.

TYPE I CONTAINS PERCHLOROETHYLENE, TOLUENE AND XYLENE. TYPE II CONTAINS PERCHLOROETHYLENE AND TOLUENE.

Keep away from heat, sparks and flame. Perchloroethylene or its vapors may form corrosive fumes in contact with flames or hot glowing surfaces. Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin. Use an ultraviolet barrier cream on exposed skin. Wash thoroughly after handling. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations. Do not take internally.

KEEP OUT OF REACH OF CHILDREN.

Use with adequate ventilation during application and drying. In tanks and other confined areas, use only with adequate forced air ventilation to prevent dangerous concentrations of vapors which could cause death from explosion or from breathing. Use fresh air masks, clean protective clothing and explosion-proof equipment. Prevent flames, sparks, welding and smoking. Follow OSHA regulations regarding ventilation and respiratory equipment.

FIRST AID: In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. If sunburn occurs, treat symptomatically. If affected by breathing of vapor, move to fresh air. If swallowed, CALL A PHYSICIAN IMMEDIATELY. DO NOT induce vomiting.

IN CASE OF FIRE: Use dry chemical, foam, water fog or CO₂. Cool closed containers with water.

Non-photochemically Reactive.

WARRANTY

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable and are intended for use by persons having skill and knowhow, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

Revised November 1980 Supersedes all previous data sheets printed on this product.
Reprinted August, 1981

United States Summary
Judgment Motion,
Ex. 80, Page 842

Exhibit 81

KOPPERS

Protective Coatings

TECHNICAL DATA SHEET

TYPE OF COATING

COAL TAR

*Adhesion apparently OK over mill undercoat only
on sandblasted steel.*

*No good over
mill Undercoat on smooth
metal surfaces.*

Product: BITUMASTIC SUPER TANK SOLUTION

DESCRIPTION:

Bitumastic Super Tank Solution is a heavy duty, high build, cold applied, highly water resistant coal tar base coating. After normal agitation it is ready to apply. It is normally self priming and will produce a dried film thickness of 8 to 10 mils per coat with good film thickness retention on edges. The coating dries by solvent evaporation and is easy to recoat or repair. The dried film will not sag or flow at maximum temperatures encountered in normal atmospheric exposure and it will not crack at -20°F. Bitumastic Super Tank Solution has an unlimited shelf life with a minimum of settling. It is made from pitch derived from suitable tars, selected solvents and mineral fillers affording a highly water-resistant coating.

Available in Type I (EPA Grade) and Type II (EPA acceptance pending).

USE: FOR INDUSTRIAL USE ONLY: NOT INTENDED FOR USE IN THE HOME.

It is designed primarily for the long-term protection of the interior of large steel water storage tanks and the interior of steel water transmission pipelines used for either potable or irrigation water service.

DO NOT USE FOR DEAD END, STAGNANT OR VERY LOW FLOW LINES.

DO NOT INTERMIX OR INTERCOAT TYPES I AND II.

Its required thick coat application deposits 4 to 5 times the thickness of conventional paint.

TECHNICAL DATA:

Number of coats:
Volume solids:
Theoretical coverage,
mil sq.ft./gal.:
Coverage to achieve minimum
dry film thickness, sq.ft./gal./
coat (allows for approximately
20% application loss):
Film build ratio:
Minimum dry film required
per coat, mils:
Wet film required
per coat, mils:
Drying time at 70°F.
and 50% relative humidity:
To touch, hours:

TYPE I
2 minimum
63%
1010
80 to 100
8 to 10
13 to 16
2

TYPE II
2 minimum
60%
960
75 to 95
8 to 10
13 to 17
2 to 3

*244 Epoxy Primer
on then coat of STS
OK for Primer
If 621 or 691 is
used must be
well aged.
See file letter
12/10/75*

Koppers Company, Inc., Pittsburgh, Pennsylvania 15219

United States Summary
Judgment Motion,
Ex 81 Page 843

TECHNICAL DATA
(Continued):

Between coats: A minimum of 24 hours, or until first coat dries firm.

Before submerging: The normal dry time is 10 days after the topcoat is applied. Thorough drying must be obtained between coats and after application of the final coat prior to submerging. It is essential that the solvent vapors released during application and from the deposited film be removed from the vessel or tank by means of exhaust blowers or suction fans. Ventilation blowers or fans should be ducted to or from the bottom of the tank.

During coating application, the volume of fresh air introduced must provide good air movement. The volume of fresh air should be not less than 300 cu. ft. air/minute for each one gallon of coating applied/hour. It is customary in large tanks (0.5-2MM gallons) to use a ducted 10,000 c.f.m. blower.

After application, to completely remove all traces of solvent from the coating or tank, forced ventilation at the rate of at least one change of air/hour should be continued for a period of ten days. Temperature and humidity readings above or below 70°F. and 50% R. H. may extend or shorten the time required to some degree.

Before placing in service, the entire coated surfaces shall be washed down with water and disinfectant, then flushed, according to AWWA D105.

Color: Type I: Flat Black; Type II: Gloss Black.

Thinner: Koppers Thinner 2000C. Do not use ordinary paint thinners, mineral spirits, gasoline or turpentine as they will destroy the material. Do not thin except in cold weather, when ½ pint of Koppers Thinner 2000C per gallon is the maximum amount allowable.

Cleaner: Koppers Thinner 2000C, to clean brushes, rollers and spray equipment.

Surface preparation: Apply only to clean dry surfaces. Remove weld spatter by chipping or grinding. Grind off all sharp edges or high points on weld seams. Remove oil and grease deposits with Koppers Thinner 2000C. Sandblast metal clean to NACE-3 or SSPC-SP6 minimum.

The maximum height of sandblast profile must not exceed 3 mils.

Surfaces must be coated the same day they are sandblasted.

Primer:

Metal: Self-priming. If a shop primer is required, apply one thinned coat of Bitumastic Super Tank Solution for a minimum dry film thickness of 2 mils. Do not store shop-primed steel or the completed Super Tank Solution application where exposed to direct sunlight.

Note: Galvanized and non-ferrous metal surfaces: First degrease with Koppers Thinner 2000C, then prime with Koppers 40 Passivator.

Mixing instructions: Use a low speed power mixer (1/2" electric drill and "Jiffy" blade as examples) to mix thoroughly until smooth and uniform.

TECHNICAL DATA
(Continued):

Methods of application: Brush, roller, conventional or airless spray. Best method of application is spray with airless spray being preferred. Use a technique which will result in a film free of fog or splatter. This will provide a theoretical dry film thickness of 8 to 10 mils when applied at a wet film thickness of 13 to 16 mils for Type I, 13 to 17 mils for Type II.

To insure complete coverage of the welds and in conjunction with the first coat application, the material should be brushed in. Spray over the wet brush coat on the welds.

Airless Spray:

Pump: Graco 30:1 Bulldog or equivalent.

Hose: 3/8" i.d. to 50 Ft.; 1/2" i.d. over 50 Ft.
Use of 1/4" whip end at gun to facilitate handling is recommended.

Gun: Hand gun only; use 30 mesh manifold filter.

Tip sizes: .025" to .035"; 12" fan width is suggested.

Pressure: 50 to 90 psi at pump.

Conventional Spray:

Material pump: Minimum 8:1 ratio.

Hoses: From material pump: 3/8" i.d. to 100 Ft.;
3/4" i.d. over 100 Ft.;
use hoses with solvent resistant linings.

From air line: 1/2" i.d.

Gun: Hand gun; 1/8" tip and 3/16" cap or 1/4" tip
and 1/4" cap.

Pressures: Material: 20 to 50 psi.

Atomization: 50 to 80 psi

Individual pressure regulators are required for both material pump and atomizing air.

In cold weather, an in-line heater, such as a Speed-Flo, will facilitate application. Use of an in-line heater is highly recommended whenever airless spray is used.

Do not apply at temperatures below 40°F. or if rain threatens before the coating is dry.

Temperature limitations: Dry: Type I: -20°F to 160°F. Wet: 120°F.
Type II: -20°F to 400°F.

Storage life: 1 year minimum

Packaging: 55-gallon drums, 5-gallon pails and 1-gallon cans

PRECAUTIONS: Take these precautions during application and before the coating dries.
See Material Safety Data Sheet for this product.

D A N G E R !

**HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL.
SKIN AND EYE IRRITANT. MAY SENSITIZE SKIN TO SUN-
LIGHT. COMBUSTIBLE.**

**TYPE I CONTAINS PERCHLOROETHYLENE, TOLUENE AND
XYLENE. TYPE II CONTAINS PERCHLOROETHYLENE AND
TOLUENE.**

Keep away from heat, sparks and flame. Perchloroethylene or its vapors may form corrosive fumes in contact with flames or hot glowing surfaces. Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin. Use an ultraviolet barrier cream on exposed skin. Wash thoroughly after handling. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations. Do not take internally.

KEEP OUT OF REACH OF CHILDREN.

Use with adequate ventilation during application and drying. In tanks and other confined areas, use only with adequate forced air ventilation to prevent dangerous concentrations of vapors which could cause death from explosion or from breathing. Use fresh air masks, clean protective clothing and explosion-proof equipment. Prevent flames, sparks, welding and smoking. Follow OSHA regulations regarding ventilation and respiratory equipment.

FIRST AID: In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. If sunburn occurs, treat symptomatically. If affected by breathing of vapor, move to fresh air. If swallowed, CALL A PHYSICIAN IMMEDIATELY. DO NOT induce vomiting.

IN CASE OF FIRE: Use dry chemical, foam, water fog or CO₂. Cool closed containers with water.

Non-photochemically Reactive.

WARRANTY

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable and are intended for use by persons having skill and knowhow, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

Revised April 1983 Supersedes all previous data sheets printed on this product.

United States Summary
Judgment Motion,
Ex 81, Page 846

Exhibit 82

KOPPERS

Protective Coatings

TECHNICAL DATA SHEET

TYPE OF COATING
COAL TAR

RECEIVED

AUG 1 1984

E. R. CTGS. DEV.

**Product: BITUMASTIC SUPER TANK
SOLUTION-HIGH SOLIDS**

DESCRIPTION: Bitumastic Super Tank Solution-High Solids is a revised version of one of the best known, most effective protective coatings for use as an interior lining on steel tanks and piping systems for potable and irrigation water services. It is a high build, cold applied, water resistant coal tar coating. It is self-priming on steel, provides required film thickness in two coats, dries by solvent evaporation, and is easy to recoat and repair. The dried coating will not sag or flow at maximum temperatures found in normal atmospheric exposure and will not crack at -20°F .

Compared to preceding versions of the product, Bitumastic Super Tank Solution-High Solids:

1. Provides 10% to 20% higher coverage from the same volume of coating.
2. Contains up to 20% less solvent by volume.
3. Is still easily applied as supplied by brush, roller or spray, without the need to add thinner.
4. Meets all current and proposed air pollution standards for volatile organic compound content (VOC).

Application has been made to the U.S. EPA for acceptance of this product.

USE: FOR INDUSTRIAL USE ONLY. NOT INTENDED FOR USE IN THE HOME.

Bitumastic Super Tank Solution-High Solids is designed for the long-term protection of the interior of large steel storage tanks and steel transmission pipelines for potable and irrigation water service.

DO NOT USE FOR DEADEND, STAGNANT OR VERY LOW-FLOW LINES OR IN SMALL OR LOW-FLOW TANKS (UNDER 10,000 GALLON CAPACITY). DO NOT MIX WITH ANY OTHER VERSIONS OF THIS PRODUCT.

Koppers Company, Inc., Pittsburgh, Pennsylvania 15219

United States Summary
Judgment Motion.
Ex 82 Page 847

TECHNICAL DATA:

Number of coats: 2 minimum

Volume solids: 70%

Theoretical coverage: 1125 mil sq. ft./gallon

Coverage to achieve minimum dry film thickness: 90 to 110 sq. ft./gal./coat (allows for approximate 20% application loss).

Film build ratio:

Minimum dry film required per coat: 8 to 10 mils

Wet film required per coat: 12 to 14 mils

Drying time at 70°F. and 50% relative humidity:

To touch: 2 to 3 hours

Between coats: A minimum of overnight to 24 hours.

Before submerging: The normal dry time is 10 days after the topcoat is applied. Thorough drying must be obtained between coats and after application of the final coat prior to submerging. It is essential that the solvent vapors released during application and from the deposited film be removed from the vessel or tank by means of exhaust blowers or suction fans. Ventilation blowers or fans should be ducted to or from the bottom of the tank.

During coating application, the volume of fresh air introduced must provide good air movement. The volume of fresh air should be not less than 300 cu. ft. air/minute for each one gallon of coating applied/hour. It is customary in large tanks (0.5-2MM gallons) to use a ducted 10,000 c.f.m. blower.

After application, to completely remove all traces of solvent from the coating or tank, forced ventilation at the rate of at least one change of air/hour should be continued for a period of ten days. Temperature and humidity readings above or below 70°F and 50% R. H. may extend or shorten the time required to some degree.

Before placing in service, the entire coated surfaces shall be washed down with water and disinfectant, then flushed, according to AWWA D105.

Color: Gloss Black.

Thinner: THINNING NOT REQUIRED. In situations where some thinning is needed use Koppers Thinner 2000 (Xylol) only. Under no circumstances is thinner 2000C to be used.

Cleaner: Koppers Thinner 2000.

TECHNICAL DATA
(Continued):

Surface preparation: Apply only to clean dry surfaces. Remove weld spatter. Grind off all sharp edges and rough weld seams. Remove oil and grease deposits with Koppers Thinner 2000. Sandblast metal clean to NACE-3 or SSPC-SP6 minimum.

The maximum height of sandblast profile must not exceed 3 mils.

Surfaces must be coated the same day they are sandblasted.

Primer:

Metal: Self-priming. If a shop primer is required, apply one coat of Bitumastic Super Tank Solution for a minimum dry film thickness of 2 mils. Do not store shop-primed steel or the completed Super Tank Solution application where exposed to direct sunlight. Coating will crack (alligator) if exposed to sunlight.

Note: Galvanized and non-ferrous metal surfaces: First degrease with Koppers Thinner 2000, then prime with Koppers 40 Passivator.

Mixing instructions: Use a low speed power mixer (1/2" electric drill and "Jiffy" blade as examples) to mix thoroughly until smooth and uniform.

Methods of application: Brush, roller, conventional or airless spray. Best method of application is spray with airless spray being preferred. Use a technique which will result in a film free of fog or splatter. This will provide a theoretical dry film thickness of 8 to 10 mils when applied at a wet film thickness of 12 to 14 mils.

To insure complete coverage of the welds and in conjunction with the first coat application, the material should be brushed in. Spray over the wet brush coat on the welds.

Airless Spray:

Pump: Graco 30:1 Bulldog or equivalent.
Hose: 3/8" i.d. to 50 Ft.; 1/2" i.d. over 50 Ft. Use of 1/4" whip end at gun to facilitate handling is recommended.
Gun: Hand gun only; use 30 mesh manifold filter.
Tip sizes: .025" to .035"; 12" fan width is suggested. Use reversible tips.
Pressure: 50 to 90 psi at pump.

Conventional Spray:

Material pump: Minimum 8:1 ratio.
Hoses: From material pump: 3/8" i.d. to 100 Ft.; 3/4" i.d. over 100 Ft.; use hoses with solvent resistant linings.
From air line: 1/2" i.d.
Gun: Hand gun; 1/8" tip and 3/16" cap or 1/4" tip and 1/4" cap.
Pressures: Material: 20 to 50 psi.
Atomization: 50 to 80 psi.

TECHNICAL DATA
Methods of application
(Continued):

Individual pressure regulators are required for both material pump and atomizing air.

In cold weather, an in-line heater, such as a Speed-Flo, will facilitate application. Use of an in-line heater is highly recommended whenever airless spray is used.

Do not apply at temperatures below 40°F or if rain is expected before the coating is dry.

Temperature limitations: Dry: — 20°F to 400°F Wet: 120°F

Storage life: 1 year minimum

Packaging: 55-gallon drums, 5-gallon pails and 1-gallon cans

PRECAUTIONS: Take these precautions during application and before the coating dries.

See Material Safety Data Sheet for this product.

D A N G E R !

FAMMABLE. HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. SKIN AND EYE IRRITANT. MAY SENSITIZE SKIN TO SUNLIGHT.

CONTAINS XYLENE.

Keep away from heat, sparks and flame. Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin. Use an ultraviolet barrier cream on exposed skin. Wash thoroughly after handling. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations. Do not take internally.

KEEP OUT OF REACH OF CHILDREN.

Use with adequate ventilation during application and drying. In tanks and other confined areas, use only with adequate forced air ventilation to prevent dangerous concentrations of vapors which could cause death from explosion or from breathing. Use fresh air masks, clean protective clothing and explosion-proof equipment. Prevent flames, sparks, welding and smoking. Follow OSHA regulations regarding ventilation and respiratory equipment.

FIRST AID: In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. If sunburn occurs, treat symptomatically. If affected by breathing of vapor, move to fresh air. If swallowed, CALL A PHYSICIAN IMMEDIATELY. DO NOT induce vomiting.

IN CASE OF FIRE: Use dry chemical, foam, water fog or CO₂. Cool closed containers with water.

Photochemically Reactive. Volatile Organic Compounds Content (VOC) is less than 2.5 pounds/gallon (300 grams/liter) as supplied.

WARRANTY

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable and are intended for use by persons having skill and knowhow, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

April 1984

United States Summary
Judgment Fiction,
Ex 82, Page 850

Exhibit 83

∫

KOPPERS

Protective Coatings

TECHNICAL DATA SHEET

TYPE OF COATING
COAL TAR

Product: BITUMASTIC TANK SOLUTION

DESCRIPTION: A self-priming, fast-drying protective coating formulated with highly refined tars, selected solvents and other ingredients which impart desirable application and protective qualities. It has a consistency of thin fluid paint or varnish and does not contain added fillers or fibers.

USE: FOR INDUSTRIAL USE ONLY. NOT INTENDED FOR USE IN THE HOME.

A coating designed primarily for the interior protection of metal or concrete potable water tanks, air conditioning equipment and other areas where it is essential to minimize taste and/or odor contamination of air or water.

DO NOT USE FOR DEADENDS, STAGNANT OR VERY LOW FLOW LINES.

RECEIVED
AUG 7 1984
E. R. CTGS. DEV.

TECHNICAL DATA:

Number of coats: 2 or 3

Volume solids: 58%

Theoretical coverage: 930 mils sq. ft. per gal.

Coverage to achieve
minimum dry film thickness: 2 mils dry - 370 sq.ft./gal.*
3 mils dry - 250 sq.ft./gal.*

*Allows for approximate 20% application loss. Practical first coat application rate on medium porosity concrete is approximately 200 sq.ft./gal.

Film build ratio:

Minimum dry film required
per coat: 2 to 3 mils

Wet film required
per coat: 2 mils dry - 3.5 mils wet
3 mils dry - 5.2 mils wet

Drying time at 70°F.
and 50% relative humidity:

To touch: 2 hours

Between coats: 12 hours

Prior to use: The normal dry time is 7 days after the topcoat is applied. Thorough drying must be obtained between coats and after application of the final coat before submerging. Forced ventilation is necessary in areas

Koppers Company, Inc., Pittsburgh, Pennsylvania 15219

United States Summary
Judgment Motion,
Ex 83, Page 851

TECHNICAL DATA

Prior to use
(Continued):

of limited air circulation to insure thorough evaporation and removal of all solvents in the coating film on the potable water tank or container surfaces. Prior to putting the coated potable water tanks or containers into service, they must be flushed thoroughly with clean water to eliminate all taste and odors.

Color: Glossy Black

Thinner: Koppers Thinner 2000. Use also to clean brushes, rollers or spray equipment. Use Koppers Thinner 2000C when air regulatory version is required.

Do not use ordinary paint thinners, mineral spirits, gasoline or turpentine as they will destroy the material.

Do not thin except in cold weather or for spray application, when 1/2 pint of Koppers Thinner 2000 per gallon is the maximum amount allowable.

Cleaner: Koppers Thinner 2000. Use Koppers Thinner 2000C when air regulatory version is required.

Surface preparation:

Steel: Remove all dust, dirt, loose mill scale, welding scale, rust, paint or other foreign material by sand or grit blasting (NACE 3 or SSPC-SP6-63), hand or power brushing and/or scraping. For total immersion blast to a NACE-2 or SSPC-SP10-63. Degrease using Koppers Thinner 2000.

Concrete: Remove all dirt, dust, loose sand and laitance.

All surfaces must be completely dry before applying Bitumastic Tank Solution.

Primer: Metal or Concrete — none.

Methods of application: Brush, roller, dipping, conventional or airless spray.
Note: Natural bristle brushes or phenolic cored rollers only should be used. Do not apply to surfaces that will be exposed to rain before the coating is dry or on surfaces with temperatures below 40°F.

Temperature limitations: dry heat: 400°F. wet heat: 100°F.

Storage life: One year minimum

Pot life: Not applicable, single component

Packaging: 55 gallon drums, 5 gallon pails, and 1 gallon cans

PRECAUTIONS: Take these precautions during application and before the coating dries.

Regular Version

Version conforming to
air pollution control
regulations

D A N G E R !

D A N G E R !

PRECAUTIONS

(Continued):

Flammable. Harmful or fatal if swallowed. Vapor harmful. Skin and eye irritant.

Harmful or fatal if swallowed. Vapor harmful. Skin and eye irritant. Combustible.

CONTAINS XYLOL

CONTAINS PERCHLOROETHYLENE
AND TOLUOL

Keep away from heat, sparks and flame. Perchloroethylene or its vapors may form corrosive fumes in contact with flames or hot glowing surfaces. Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations. Do not take internally.

KEEP OUT OF REACH OF CHILDREN.

Use with adequate ventilation during application and drying. In tanks and other confined areas, use only with adequate forced air ventilation to prevent dangerous concentrations of vapors which could cause death from explosion or from breathing. Use fresh air masks, clean protective clothing and explosion-proof equipment. Prevent flames, sparks, welding and smoking. Follow OSHA regulations regarding ventilation and respiratory equipment.

FIRST AID: In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. If sunburn occurs, treat symptomatically. If affected by breathing of vapor, move to fresh air. If swallowed, CALL A PHYSICIAN IMMEDIATELY. DO NOT induce vomiting.

IN CASE OF FIRE: Use dry chemical, foam, water fog or CO₂. Cool closed containers with water.

Non-photochemically Reactive.

WARRANTY

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable and are intended for use by persons having skill and knowhow, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

Revised July 1984. Supersedes all previous data sheets printed on this product.

United States Summary
Judgment Motion,
Ex 83, Page 853